PROGRAMMED ARITHMETIC WORKBOOK



ONE

K. A. Hesse

Programmed Arithmetic Workbook

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Illustrated by David Hughes

1724

Longmans

Longmans, Green and Co Ltd
48 Grosvenor Street, London W1

Associated companies, branches and representatives throughout the world

First published 1967

NOTES FOR THE TEACHER

Success, even if it is only limited, encourages in children that sense of achievement which is the key to progress. Conversely, nothing dulls their enthusiasm more quickly than needless repetition of a process which has already been mastered.

It is this principle on which the *Programmed Arithmetic Workbooks* have been planned. After any necessary assistance from the teacher in the initial stages each pupil, according to his ability, creates his own programme in mastering the number combinations. This is how the programming is achieved:

> After a few introductory pages practice is provided with a small group of number combinations, each repeated several times, and the pupils are then presented with a test line of seven sums. Success at the first attempt is followed by directions to proceed to the next test line; partial success is followed by directions leading to further practice and thence to an alternative test line. (After the first, each subsequent test line includes one sum from the previous set, so that only six new number combinations are tested at any one time.)

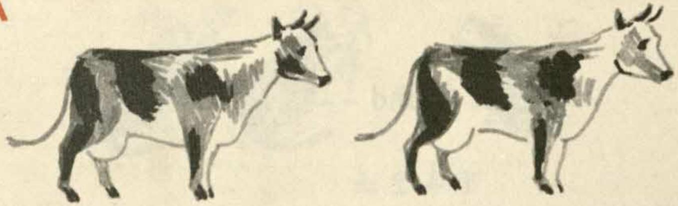
The sequence of practice, test, correction, practice and re-test, is interrupted at intervals by groups of revision sums. All pupils, irrespective of their ability, are led by the instructions to work on these groups. It is suggested that the brighter pupils be encouraged to use these revision groups to "work against the clock" and so improve their speed with accuracy.

An edition with answers is available.

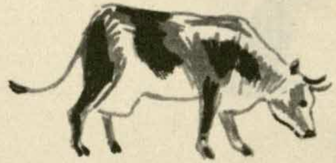
Printed in Great Britain by William Clowes and Sons, Limited
London and Beccles

How many?

A



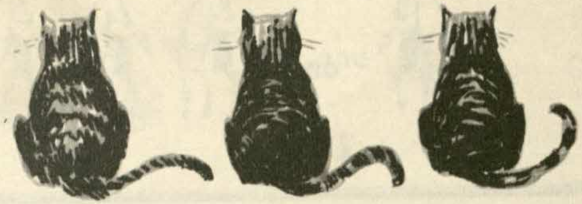
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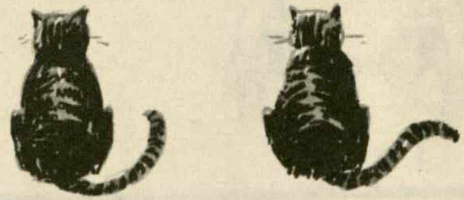
2 + 1 =

2 + 1 =
1 + 1 =
3 + 1 =
4 + 1 =
5 + 1 =
6 + 1 =

B



and



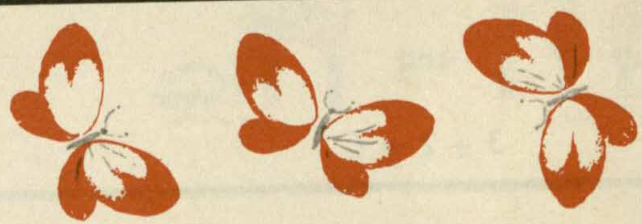
3 + 2 =

3 + 2 =
1 + 2 =
2 + 2 =
4 + 2 =
5 + 2 =
6 + 2 =

C



and



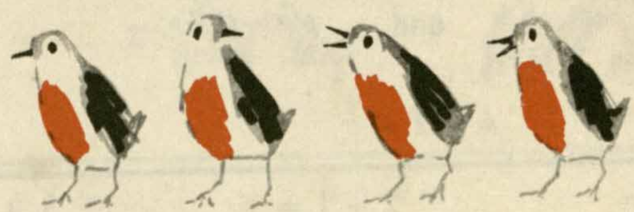
3 + 3 =

3 + 3 =
1 + 3 =
2 + 3 =
4 + 3 =
5 + 3 =
6 + 3 =

D



and



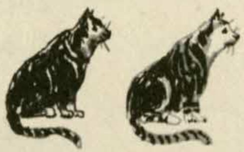
3 + 4 =

3 + 4 =
2 + 4 =
1 + 4 =
4 + 4 =
5 + 4 =
6 + 4 =

go to page 2, A

Add +

A



and



2 + 1 =

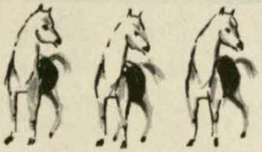


and



1 + 2 =

B



and



3 + 1 =

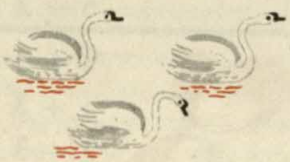


and



1 + 3 =

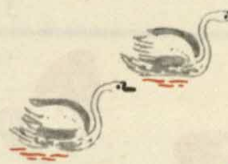
C



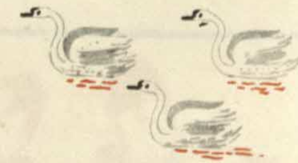
and



3 + 2 =



and



2 + 3 =

D



and



4 + 2 =



and



2 + 4 =

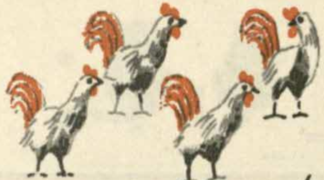
E

1 + 1 =	2 + 1 =	1 + 2 =	3 + 1 =	1 + 3 =
3 + 2 =	2 + 3 =	2 + 2 =	4 + 2 =	2 + 4 =

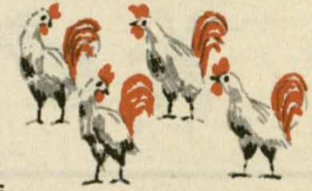
go to page 3, A

Add +

A

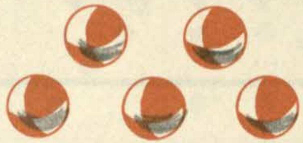
 and 

4 + 1 =

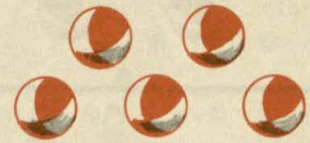
 and 

1 + 4 =

B

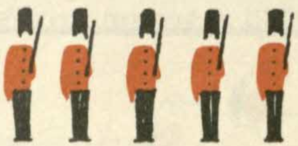
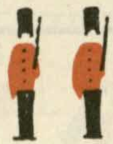
 and 

5 + 1 =

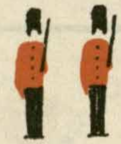
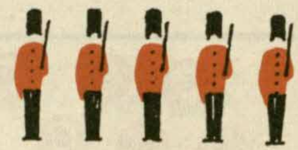
 and 

1 + 5 =

C

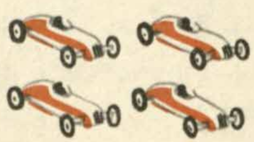
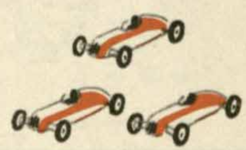
 and 

5 + 2 =

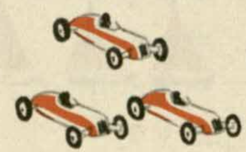
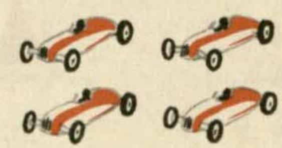
 and 

2 + 5 =

D

 and 

4 + 3 =

 and 

3 + 4 =

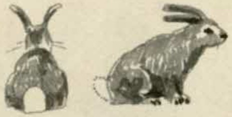
E

2 + 3 =	5 + 1 =	1 + 5 =	5 + 2 =	2 + 5 =
4 + 1 =	1 + 4 =	3 + 3 =	4 + 3 =	3 + 4 =

go to page 4, A

Make your own sums

A

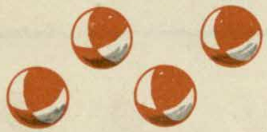
 and 

.....+.....=.....

 and 

.....+.....=.....

B

 and 

.....+.....=.....

 and 

.....+.....=.....

C

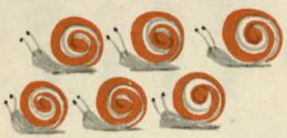
 and 

.....+.....=.....

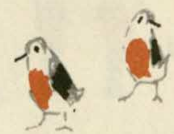
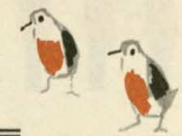
 and 

.....+.....=.....

D

 and 

.....+.....=.....

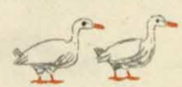
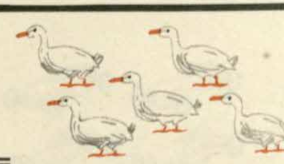
 and 

.....+.....=.....

E

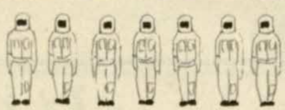
 and 

.....+.....=.....

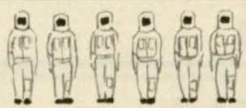
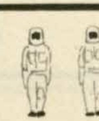
 and 

.....+.....=.....

F

 and 

.....+.....=.....

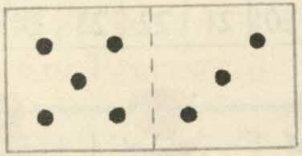
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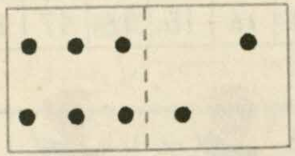
.....+.....=.....

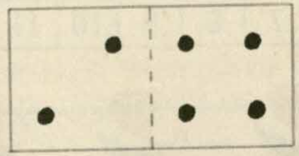
go to page 5, A

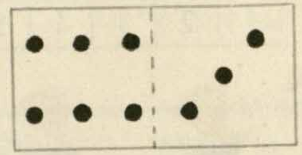
Make your own sums

A

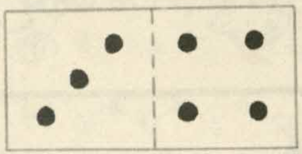

..... + ... = ...

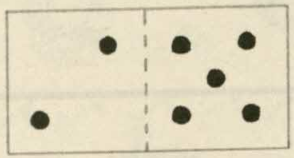

..... + ... = ...

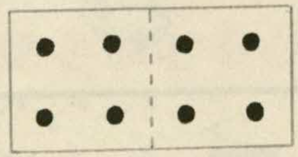

..... + ... = ...

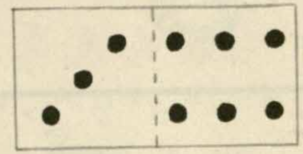

..... + ... = ...

B


..... + ... = ...


..... + ... = ...


..... + ... = ...


..... + ... = ...

Write answers only: work across the page

C

1	2	3	4	5	6	7	8	9	10	11	12

Practice:

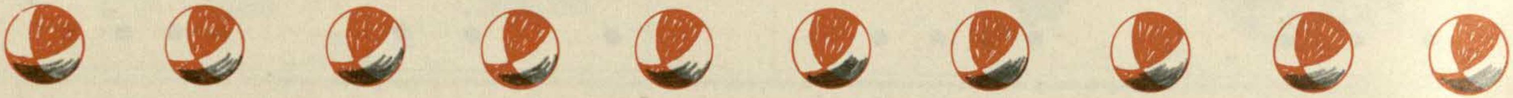
5 + 2 =	7 + 2 =	4 + 3 =	3 + 4 =	7 + 1 =	9 + 1 =	8 + 1 =
1 + 3 =	7 + 1 =	8 + 2 =	6 + 3 =	1 + 4 =	7 + 2 =	3 + 4 =
2 + 4 =	5 + 2 =	7 + 2 =	4 + 3 =	7 + 3 =	1 + 3 =	7 + 1 =
8 + 3 =	7 + 2 =	3 + 4 =	9 + 2 =	8 + 2 =	6 + 3 =	1 + 4 =
4 + 3 =	3 + 4 =	4 + 4 =	1 + 3 =	7 + 3 =	9 + 2 =	4 + 3 =
8 + 1 =	1 + 3 =	8 + 2 =	6 + 3 =	9 + 2 =	1 + 4 =	8 + 1 =
6 + 3 =	8 + 2 =	9 + 2 =	1 + 4 =	4 + 3 =	8 + 2 =	3 + 4 =
1 + 4 =	7 + 3 =	9 + 1 =	8 + 2 =	7 + 3 =	9 + 2 =	6 + 3 =
7 + 2 =	9 + 2 =	4 + 3 =	7 + 3 =	6 + 3 =	7 + 1 =	7 + 3 =

go to page 6, A

How many?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

A



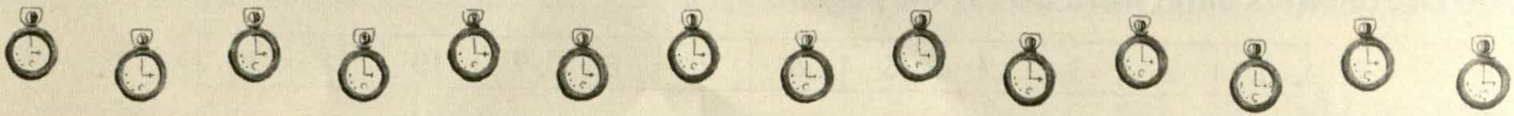
B



C



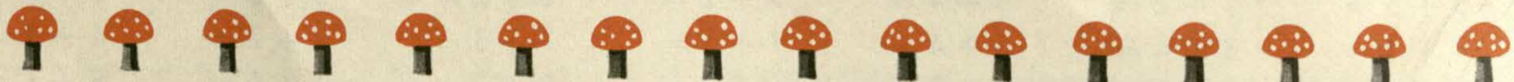
D



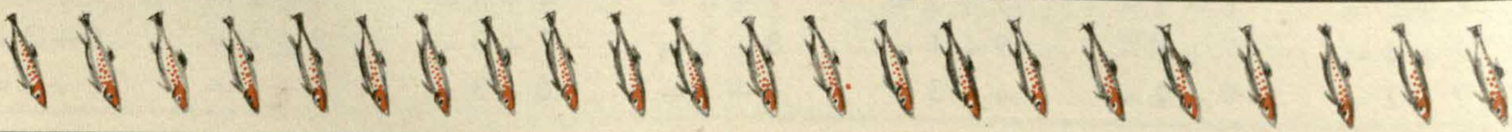
E



F



G



go to page 7, A

A 1 + 1 = 2 + 1 = 2 + 2 = 1 + 2 = 3 + 1 = 3 + 2 = 4 + 1 =

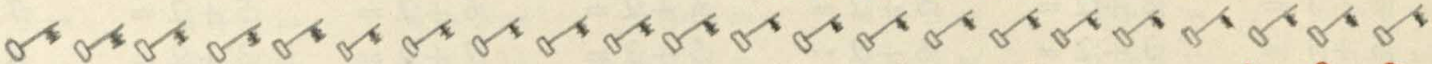
6 or 7 correct, go to B; 5 or less, practise with apparatus, then go to B

B 6 + 1 = 3 + 2 = 5 + 1 = 5 + 2 = 4 + 2 = 7 + 2 = 6 + 2 =

6 or 7 correct, go to page 8, C; 5 or less, go to C

C **How many in each row?**

(a)  (b) 

(c) 

(d) 

(e) 

What are the missing numbers?

(f) 2, 3, 4, , , (g) 7, , , (h) 6, 7, 8, , , (i) 9, , , (j) 10, 11, 12, , ,

Which number comes after

(k) 3 ? 8 ? 5 ? 7 ? 12 ? 4 ? 15 ? 9 ? 11 ? 17 ?

(l) 1 ? 6 ? 12 ? 8 ? 10 ? 13 ? 19 ? 7 ? 18 ? 9 ?

go to D

D **Add + : work across the page**

2 + 1 =	3 + 1 =	4 + 1 =	4 + 2 =	3 + 2 =	5 + 1 =	5 + 2 =
1 + 1 =	6 + 1 =	3 + 2 =	6 + 2 =	5 + 2 =	7 + 1 =	7 + 2 =
3 + 1 =	2 + 1 =	2 + 2 =	4 + 1 =	4 + 2 =	3 + 1 =	3 + 2 =
2 + 2 =	6 + 2 =	4 + 2 =	5 + 2 =	3 + 2 =	6 + 1 =	7 + 2 =
4 + 2 =	7 + 1 =	7 + 2 =	3 + 2 =	2 + 2 =	6 + 2 =	5 + 2 =

go to page 8, A

A

5 + 1 =	6 + 2 =	3 + 2 =	7 + 2 =	4 + 2 =	6 + 1 =	5 + 2 =

6 or 7 correct, go to C; 5 or less, go to B

B Work across the page

3 + 1 =	3 + 2 =	5 + 1 =	6 + 1 =	4 + 2 =	6 + 2 =	7 + 2 =
5 + 1 =	6 + 1 =	6 + 2 =	5 + 2 =	7 + 1 =	7 + 2 =	3 + 2 =
5 + 2 =	7 + 1 =	7 + 2 =	6 + 2 =	5 + 1 =	4 + 2 =	6 + 2 =
6 + 1 =	6 + 2 =	5 + 2 =	4 + 2 =	6 + 2 =	5 + 2 =	7 + 2 =
5 + 1 =	3 + 2 =	6 + 2 =	5 + 2 =	7 + 2 =	3 + 2 =	4 + 2 =
6 + 2 =	7 + 2 =	5 + 1 =	4 + 2 =	6 + 1 =	5 + 2 =	7 + 2 =
5 + 2 =	6 + 2 =	7 + 2 =	6 + 2 =	4 + 2 =	7 + 2 =	5 + 2 =

go to C

C

7 + 1 =	8 + 1 =	7 + 2 =	8 + 2 =	9 + 1 =	1 + 3 =	9 + 2 =

6 or 7 correct, go to page 9, A; 5 or less, go to D

D Work across the page

3 + 1 =	1 + 3 =	3 + 2 =	5 + 2 =	6 + 2 =	7 + 1 =	4 + 2 =
5 + 1 =	7 + 1 =	7 + 2 =	1 + 3 =	8 + 1 =	8 + 2 =	1 + 3 =
3 + 1 =	1 + 3 =	7 + 1 =	8 + 1 =	8 + 2 =	9 + 2 =	7 + 2 =
9 + 1 =	9 + 2 =	1 + 3 =	7 + 2 =	1 + 3 =	9 + 1 =	9 + 2 =
7 + 1 =	8 + 1 =	8 + 2 =	9 + 1 =	9 + 2 =	1 + 3 =	8 + 2 =
8 + 2 =	9 + 1 =	9 + 2 =	7 + 1 =	8 + 2 =	9 + 2 =	1 + 3 =
8 + 1 =	8 + 2 =	1 + 3 =	9 + 2 =	7 + 2 =	9 + 1 =	9 + 2 =

go to page 10, A

A

1 + 2 =	2 + 3 =	3 + 3 =	9 + 2 =	5 + 3 =	4 + 3 =	6 + 3 =

6 or 7 correct, go to C; 5 or less, go to B

B **Work across the page**

2 + 2 =	4 + 2 =	1 + 2 =	1 + 3 =	2 + 3 =	3 + 3 =	5 + 3 =
4 + 3 =	3 + 3 =	5 + 3 =	6 + 2 =	3 + 3 =	4 + 3 =	6 + 3 =
1 + 2 =	2 + 2 =	2 + 3 =	4 + 3 =	6 + 3 =	5 + 3 =	3 + 3 =
3 + 3 =	6 + 3 =	4 + 3 =	5 + 3 =	4 + 3 =	3 + 3 =	6 + 3 =
4 + 3 =	5 + 3 =	6 + 3 =	4 + 3 =	3 + 3 =	6 + 3 =	5 + 3 =
6 + 3 =	3 + 3 =	2 + 3 =	5 + 3 =	4 + 3 =	2 + 3 =	6 + 3 =

go to page 10, C

C **Practice: work across the page**

1	2	3	4	5	6	7	8	9	10	11	12

4 + 1 =	1 + 4 =	2 + 4 =	3 + 4 =	6 + 3 =	7 + 3 =	8 + 3 =
4 + 4 =	6 + 3 =	3 + 4 =	8 + 3 =	2 + 4 =	1 + 5 =	1 + 4 =
2 + 4 =	8 + 3 =	7 + 3 =	3 + 4 =	2 + 5 =	2 + 6 =	4 + 4 =
2 + 5 =	1 + 4 =	2 + 6 =	1 + 5 =	3 + 5 =	2 + 4 =	7 + 3 =
6 + 3 =	2 + 6 =	3 + 4 =	2 + 5 =	4 + 4 =	6 + 3 =	3 + 4 =
4 + 4 =	1 + 7 =	7 + 3 =	2 + 6 =	5 + 4 =	2 + 5 =	8 + 3 =
9 + 3 =	5 + 4 =	4 + 5 =	6 + 4 =	9 + 3 =	1 + 7 =	4 + 5 =
6 + 4 =	5 + 5 =	9 + 3 =	7 + 4 =	5 + 4 =	5 + 5 =	9 + 3 =
7 + 4 =	8 + 3 =	6 + 4 =	9 + 3 =	7 + 4 =	6 + 4 =	5 + 5 =
4 + 5 =	7 + 4 =	3 + 5 =	8 + 3 =	5 + 5 =	9 + 3 =	7 + 4 =

go to page 10, E

A

8 + 1 =	7 + 1 =	7 + 2 =	8 + 2 =	9 + 1 =	1 + 3 =	9 + 2 =

6 or 7 correct, go to page 9, A; 5 or less, go to B

B **Work across the page**

2 + 1 =	1 + 2 =	1 + 3 =	5 + 2 =	6 + 2 =	7 + 2 =	8 + 2 =
9 + 1 =	9 + 2 =	7 + 1 =	7 + 2 =	1 + 3 =	8 + 2 =	7 + 2 =
8 + 1 =	1 + 3 =	7 + 2 =	9 + 2 =	8 + 2 =	9 + 2 =	1 + 3 =
7 + 1 =	8 + 2 =	9 + 1 =	1 + 3 =	7 + 2 =	8 + 2 =	9 + 2 =
1 + 3 =	7 + 1 =	7 + 2 =	8 + 2 =	9 + 1 =	1 + 3 =	7 + 2 =
7 + 2 =	8 + 2 =	9 + 2 =	7 + 2 =	8 + 2 =	8 + 1 =	9 + 2 =

go to page 9, A

C

2 + 3 =	1 + 2 =	4 + 3 =	5 + 3 =	9 + 2 =	3 + 3 =	6 + 3 =

6 or 7 correct, go to page 9, C; 5 or less, go to D

D **Work across the page**

1 + 2 =	1 + 3 =	2 + 2 =	3 + 3 =	5 + 2 =	5 + 3 =	4 + 3 =
6 + 1 =	6 + 2 =	6 + 3 =	4 + 3 =	5 + 3 =	4 + 3 =	6 + 3 =
3 + 3 =	1 + 2 =	2 + 3 =	5 + 3 =	6 + 3 =	5 + 3 =	2 + 3 =
6 + 3 =	4 + 3 =	5 + 3 =	3 + 3 =	5 + 3 =	4 + 3 =	6 + 3 =
1 + 2 =	2 + 3 =	3 + 3 =	6 + 3 =	4 + 3 =	3 + 3 =	5 + 3 =
9 + 2 =	6 + 3 =	5 + 3 =	9 + 2 =	6 + 3 =	4 + 3 =	9 + 2 =
5 + 3 =	2 + 3 =	4 + 3 =	6 + 3 =	5 + 3 =	9 + 2 =	6 + 3 =

go to page 9, C

E

2 + 4 =	7 + 3 =	1 + 4 =	3 + 4 =	6 + 3 =	4 + 4 =	8 + 3 =

6 or 7 correct, go to page 11, B; 5 or less, go to page 11, A

A **Work across the page**

4 + 1 =	1 + 4 =	4 + 2 =	2 + 4 =	4 + 3 =	3 + 4 =	4 + 4 =
•		••	••••	•••	••••	••••
7 + 1 =	7 + 2 =	7 + 3 =	8 + 1 =	8 + 2 =	8 + 3 =	4 + 4 =
	••	•••			•••	
8 + 2 =	8 + 3 =	4 + 4 =	4 + 1 =	1 + 4 =	7 + 3 =	8 + 3 =
4 + 3 =	3 + 4 =	8 + 3 =	1 + 4 =	7 + 3 =	4 + 4 =	7 + 3 =
8 + 3 =	7 + 3 =	1 + 4 =	4 + 4 =	2 + 4 =	8 + 3 =	1 + 4 =
2 + 4 =	4 + 4 =	7 + 3 =	3 + 4 =	8 + 3 =	7 + 3 =	4 + 4 =
6 + 3 =	8 + 3 =	3 + 4 =	8 + 3 =	7 + 3 =	4 + 4 =	8 + 3 =
8 + 3 =	3 + 4 =	2 + 4 =	4 + 3 =	4 + 4 =	3 + 8 =	6 + 3 =

go to page 12, A

B

5 + 2 =	2 + 5 =	1 + 5 =	2 + 6 =	9 + 3 =	8 + 3 =	1 + 7 =

6 or 7 correct, go to page 13, A; 5 or less, go to C

C

5 + 1 =	1 + 5 =	5 + 2 =	1 + 7 =	6 + 2 =	8 + 3 =	9 + 3 =
•	•••••	••		••	•••	•••
2 + 1 =	1 + 2 =	5 + 1 =	1 + 5 =	5 + 2 =	2 + 5 =	9 + 3 =
5 + 1 =	1 + 5 =	5 + 2 =	2 + 7 =	6 + 2 =	2 + 6 =	1 + 7 =
9 + 3 =	2 + 6 =	1 + 7 =	9 + 3 =	1 + 5 =	1 + 7 =	9 + 3 =
2 + 6 =	1 + 5 =	2 + 5 =	2 + 6 =	5 + 2 =	9 + 3 =	2 + 5 =
2 + 5 =	9 + 3 =	1 + 5 =	9 + 3 =	1 + 7 =	2 + 6 =	9 + 3 =
5 + 2 =	6 + 2 =	2 + 6 =	8 + 3 =	2 + 5 =	9 + 3 =	1 + 7 =
9 + 3 =	2 + 5 =	8 + 3 =	9 + 3 =	6 + 2 =	2 + 5 =	8 + 3 =
1 + 7 =	2 + 6 =	2 + 5 =	1 + 5 =	8 + 3 =	2 + 6 =	9 + 3 =
2 + 6 =	2 + 5 =	9 + 3 =	2 + 6 =	5 + 2 =	9 + 3 =	2 + 5 =

go to page 12, C

A	1 + 4 =	8 + 3 =	3 + 4 =	4 + 4 =	6 + 3 =	2 + 4 =	7 + 3 =

6 or 7 correct, go to page 11, B; 5 or less, go to B

B	4 + 2 =	1 + 4 =	2 + 4 =	4 + 3 =	3 + 4 =	2 + 4 =	4 + 4 =
	1 + 4 =	8 + 3 =	2 + 4 =	7 + 3 =	4 + 4 =	8 + 3 =	3 + 4 =
	7 + 3 =	4 + 4 =	8 + 3 =	3 + 4 =	7 + 3 =	2 + 4 =	4 + 4 =
	2 + 4 =	7 + 3 =	3 + 4 =	4 + 4 =	8 + 3 =	3 + 3 =	7 + 3 =
	4 + 4 =	8 + 3 =	2 + 4 =	7 + 3 =	3 + 4 =	7 + 3 =	1 + 4 =
	4 + 1 =	1 + 4 =	3 + 4 =	8 + 3 =	4 + 4 =	6 + 3 =	8 + 3 =
	7 + 3 =	4 + 4 =	2 + 4 =	7 + 3 =	8 + 3 =	3 + 4 =	7 + 3 =
	3 + 4 =	7 + 3 =	8 + 3 =	2 + 4 =	7 + 3 =	4 + 4 =	8 + 3 =

go to page 11, B

C	2 + 5 =	1 + 7 =	2 + 6 =	1 + 5 =	5 + 2 =	8 + 3 =	9 + 3 =

6 or 7 correct, go to page 13, A; 5 or less, go to D

D	5 + 2 =	2 + 5 =	5 + 1 =	1 + 5 =	6 + 2 =	2 + 6 =	9 + 3 =
	7 + 1 =	1 + 7 =	6 + 2 =	2 + 6 =	9 + 3 =	2 + 5 =	1 + 5 =
	6 + 2 =	2 + 6 =	1 + 5 =	9 + 3 =	1 + 7 =	2 + 6 =	2 + 5 =
	1 + 7 =	5 + 2 =	2 + 6 =	1 + 7 =	2 + 5 =	2 + 5 =	9 + 3 =
	9 + 3 =	2 + 6 =	2 + 5 =	2 + 6 =	1 + 5 =	9 + 3 =	1 + 7 =
	1 + 5 =	1 + 7 =	5 + 2 =	2 + 5 =	8 + 3 =	2 + 6 =	9 + 3 =
	2 + 6 =	8 + 3 =	9 + 3 =	2 + 6 =	9 + 3 =	2 + 5 =	8 + 3 =
	8 + 3 =	2 + 6 =	2 + 5 =	9 + 3 =	2 + 6 =	8 + 3 =	9 + 3 =
	9 + 3 =	2 + 5 =	5 + 2 =	2 + 6 =	9 + 3 =	6 + 2 =	8 + 3 =

go to page 13, A

A

5 + 4 =	3 + 5 =	6 + 4 =	9 + 3 =	5 + 5 =	7 + 4 =	4 + 5 =

6 or 7 correct, go to C; 5 or less, go to B

B

3 + 1 =	1 + 3 =	5 + 3 =	3 + 5 =	5 + 4 =	4 + 5 =	5 + 5 =
		•••		••••		•••••
3 + 5 =	4 + 5 =	6 + 4 =	7 + 4 =	9 + 3 =	5 + 5 =	5 + 3 =
6 + 4 =	5 + 3 =	1 + 3 =	3 + 5 =	6 + 4 =	4 + 5 =	9 + 3 =
4 + 5 =	5 + 4 =	7 + 4 =	5 + 5 =	3 + 5 =	6 + 4 =	5 + 5 =
5 + 3 =	3 + 5 =	6 + 4 =	4 + 5 =	7 + 4 =	5 + 4 =	6 + 4 =
4 + 5 =	6 + 4 =	5 + 5 =	3 + 5 =	5 + 5 =	4 + 5 =	7 + 4 =
7 + 4 =	3 + 5 =	4 + 5 =	5 + 4 =	7 + 4 =	6 + 4 =	5 + 5 =
5 + 5 =	6 + 4 =	7 + 4 =	3 + 5 =	4 + 5 =	7 + 4 =	5 + 4 =

go to page 14, A

C Revision: work across the page

1 + 1 =	2 + 1 =	1 + 2 =	2 + 2 =	3 + 1 =	1 + 3 =	4 + 1 =
4 + 2 =	2 + 4 =	3 + 2 =	2 + 3 =	3 + 3 =	4 + 4 =	5 + 2 =
2 + 5 =	3 + 3 =	1 + 4 =	4 + 4 =	2 + 4 =	2 + 5 =	1 + 4 =
4 + 3 =	3 + 4 =	5 + 3 =	3 + 5 =	6 + 2 =	2 + 6 =	4 + 4 =
6 + 1 =	1 + 6 =	5 + 4 =	4 + 5 =	7 + 1 =	1 + 7 =	6 + 3 =
3 + 5 =	7 + 4 =	8 + 3 =	1 + 6 =	2 + 5 =	3 + 6 =	4 + 5 =
8 + 1 =	7 + 2 =	9 + 1 =	8 + 2 =	7 + 3 =	8 + 3 =	7 + 4 =
6 + 4 =	4 + 5 =	9 + 2 =	7 + 4 =	9 + 3 =	6 + 3 =	3 + 4 =
9 + 3 =	2 + 6 =	5 + 5 =	4 + 5 =	6 + 4 =	5 + 5 =	3 + 5 =
2 + 5 =	5 + 4 =	2 + 6 =	7 + 4 =	5 + 5 =	9 + 3 =	7 + 3 =
6 + 4 =	3 + 5 =	7 + 4 =	9 + 3 =	2 + 6 =	8 + 3 =	4 + 5 =

go to page 14, C

A

5 + 4 =	4 + 5 =	3 + 5 =	8 + 3 =	6 + 4 =	5 + 5 =	7 + 4 =

6 or 7 correct, go to page 13, C; 5 or less, go to B

B

2 + 1 =	1 + 2 =	3 + 2 =	2 + 3 =	5 + 3 =	3 + 5 =	5 + 5 =
5 + 4 =	4 + 5 =	6 + 4 =	7 + 4 =	5 + 5 =	7 + 4 =	6 + 4 =
5 + 3 =	3 + 5 =	5 + 4 =	4 + 5 =	6 + 4 =	5 + 5 =	7 + 4 =
5 + 4 =	5 + 5 =	3 + 5 =	6 + 4 =	5 + 5 =	7 + 4 =	6 + 4 =
3 + 5 =	7 + 4 =	4 + 5 =	5 + 4 =	7 + 4 =	6 + 4 =	5 + 5 =
7 + 4 =	5 + 5 =	6 + 4 =	4 + 5 =	6 + 4 =	5 + 4 =	7 + 4 =
3 + 5 =	2 + 3 =	5 + 5 =	6 + 4 =	3 + 5 =	7 + 4 =	5 + 5 =
7 + 4 =	5 + 5 =	6 + 4 =	4 + 5 =	6 + 4 =	5 + 4 =	7 + 4 =
3 + 5 =	2 + 3 =	5 + 5 =	6 + 4 =	3 + 5 =	7 + 4 =	5 + 5 =
7 + 4 =	6 + 4 =	7 + 3 =	5 + 5 =	4 + 5 =	5 + 5 =	7 + 4 =
4 + 5 =	3 + 5 =	5 + 5 =	7 + 4 =	2 + 5 =	6 + 4 =	4 + 5 =

go to page 13, C

C

2 + 3 =	3 + 4 =	2 + 5 =	3 + 3 =	4 + 2 =	2 + 6 =	2 + 4 =
3 + 5 =	4 + 3 =	5 + 5 =	4 + 4 =	6 + 3 =	1 + 7 =	6 + 4 =
4 + 5 =	9 + 1 =	8 + 2 =	9 + 3 =	7 + 4 =	9 + 2 =	8 + 3 =

13 or 14 correct, go to page 15, C; 12 or less, go to D

D

1 + 7 =	4 + 3 =	3 + 4 =	5 + 3 =	3 + 5 =	2 + 6 =	4 + 4 =
3 + 5 =	8 + 3 =	2 + 6 =	8 + 3 =	6 + 3 =	5 + 4 =	3 + 9 =
4 + 5 =	5 + 4 =	9 + 2 =	9 + 3 =	7 + 4 =	5 + 5 =	2 + 9 =
6 + 4 =	7 + 3 =	4 + 6 =	9 + 2 =	4 + 3 =	7 + 4 =	8 + 2 =

go to page 15, A

A

2 + 3 =	1 + 7 =	3 + 4 =	8 + 2 =	2 + 5 =	7 + 4 =	8 + 2 =
2 + 6 =	9 + 2 =	5 + 4 =	8 + 3 =	3 + 5 =	6 + 3 =	9 + 3 =

13 or 14 correct, go to C; 12 or less, go to B

B

2 + 1 =	1 + 2 =	3 + 1 =	1 + 3 =	3 + 2 =	2 + 3 =	4 + 2 =
4 + 1 =	3 + 4 =	5 + 2 =	2 + 5 =	5 + 1 =	3 + 3 =	4 + 3 =
2 + 2 =	4 + 4 =	6 + 1 =	1 + 6 =	5 + 2 =	2 + 5 =	1 + 7 =
5 + 3 =	3 + 5 =	8 + 1 =	7 + 2 =	9 + 1 =	8 + 2 =	5 + 4 =
9 + 2 =	7 + 3 =	6 + 2 =	2 + 6 =	5 + 5 =	6 + 3 =	7 + 3 =
6 + 4 =	4 + 6 =	7 + 4 =	8 + 3 =	6 + 4 =	4 + 5 =	5 + 5 =
8 + 1 =	8 + 3 =	8 + 2 =	9 + 3 =	5 + 5 =	9 + 2 =	2 + 6 =
3 + 4 =	4 + 5 =	9 + 2 =	3 + 5 =	4 + 4 =	9 + 3 =	7 + 3 =

go to C

C **Practice:**

7 + 2 =	2 + 7 =	6 + 4 =	4 + 6 =	7 + 3 =	3 + 7 =	6 + 6 =
7 + 6 =	6 + 7 =	6 + 5 =	5 + 6 =	2 + 7 =	9 + 4 =	8 + 5 =
7 + 3 =	7 + 5 =	5 + 7 =	7 + 6 =	4 + 6 =	7 + 5 =	3 + 7 =
7 + 6 =	4 + 6 =	9 + 4 =	8 + 5 =	3 + 7 =	6 + 7 =	6 + 6 =
8 + 5 =	3 + 7 =	6 + 7 =	7 + 5 =	7 + 6 =	5 + 7 =	9 + 4 =
7 + 5 =	5 + 7 =	10 + 1 =	10 + 2 =	6 + 6 =	10 + 2 =	3 + 7 =
10 + 3 =	7 + 6 =	10 + 3 =	10 + 5 =	6 + 7 =	8 + 5 =	9 + 4 =
5 + 7 =	4 + 6 =	10 + 4 =	6 + 6 =	5 + 7 =	10 + 3 =	10 + 6 =
3 + 7 =	6 + 7 =	7 + 5 =	9 + 4 =	8 + 5 =	10 + 6 =	9 + 3 =
10 + 6 =	8 + 5 =	6 + 6 =	10 + 5 =	6 + 7 =	10 + 4 =	10 + 6 =

go to page 16, A

A

4 + 6 =	6 + 5 =	2 + 7 =	5 + 6 =	8 + 4 =	2 + 6 =	6 + 6 =

6 or 7 correct, go to C; 5 or less, go to B

B

6 + 4 =	4 + 6 =	6 + 5 =	5 + 6 =	7 + 2 =	2 + 7 =	6 + 6 =
••••	••••••	•••••	••••••		•••••••	••••••
8 + 4 =	2 + 7 =	6 + 6 =	4 + 6 =	8 + 4 =	5 + 6 =	4 + 6 =
6 + 6 =	6 + 5 =	2 + 7 =	5 + 6 =	6 + 6 =	2 + 7 =	6 + 6 =
2 + 7 =	4 + 6 =	8 + 4 =	6 + 6 =	2 + 7 =	6 + 5 =	2 + 7 =
8 + 4 =	6 + 6 =	6 + 5 =	4 + 6 =	6 + 6 =	2 + 7 =	5 + 6 =
2 + 7 =	5 + 6 =	8 + 4 =	2 + 7 =	6 + 5 =	4 + 6 =	6 + 6 =
4 + 6 =	8 + 4 =	2 + 7 =	4 + 6 =	6 + 6 =	5 + 6 =	6 + 5 =
6 + 5 =	2 + 6 =	4 + 6 =	6 + 6 =	8 + 4 =	6 + 5 =	2 + 7 =
2 + 6 =	6 + 6 =	5 + 6 =	2 + 6 =	2 + 7 =	8 + 4 =	5 + 6 =
5 + 6 =	2 + 7 =	8 + 4 =	6 + 6 =	2 + 6 =	6 + 5 =	7 + 2 =

go to page 18, A

C

10 + 1 =	10 + 3 =	10 + 4 =	10 + 2 =	10 + 5 =	8 + 5 =	10 + 6 =

6 or 7 correct, go to page 17, A; 5 or less, go to D

D

10 + 1 =	10 + 2 =	10 + 3 =	10 + 5 =	10 + 4 =	10 + 6 =	10 + 4 =
	••	•••	•••••	••••	••••••	
10 + 2 =	10 + 5 =	10 + 4 =	10 + 6 =	10 + 3 =	10 + 5 =	10 + 2 =
10 + 1 =	10 + 3 =	10 + 2 =	10 + 5 =	10 + 4 =	10 + 1 =	10 + 6 =
10 + 6 =	10 + 4 =	10 + 1 =	10 + 3 =	10 + 6 =	10 + 5 =	10 + 4 =
10 + 5 =	10 + 2 =	10 + 6 =	10 + 4 =	10 + 3 =	10 + 1 =	10 + 5 =
10 + 1 =	10 + 6 =	10 + 4 =	10 + 2 =	10 + 5 =	10 + 6 =	10 + 3 =
8 + 3 =	8 + 4 =	8 + 5 =	10 + 5 =	10 + 6 =	10 + 7 =	10 + 4 =

go to page 18, C

A **Complete:**



2 apples + 1 apple = ... apples



2 apples + 0 apples = ... apples



4 apples + 2 apples = ... apples



4 apples + 0 apples = ... apples



3 apples + 0 apples = ... apples



0 apples + 3 apples = ... apples

go to B

B **Practice:**

2 + 1 =	2 + 0 =	1 + 1 =	1 + 0 =	3 + 2 =	3 + 0 =	5 + 0 =
4 + 0 =	6 + 0 =	3 + 3 =	3 + 0 =	2 + 5 =	4 + 4 =	4 + 0 =
5 + 2 =	2 + 5 =	7 + 0 =	7 + 2 =	2 + 7 =	8 + 2 =	9 + 2 =
3 + 5 =	5 + 0 =	3 + 4 =	6 + 3 =	3 + 6 =	7 + 3 =	8 + 4 =
4 + 4 =	1 + 0 =	0 + 0 =	2 + 6 =	9 + 3 =	2 + 0 =	0 + 2 =
5 + 4 =	4 + 5 =	4 + 0 =	0 + 4 =	5 + 5 =	0 + 3 =	4 + 6 =
6 + 5 =	7 + 4 =	0 + 6 =	6 + 6 =	8 + 4 =	7 + 5 =	0 + 7 =
10 + 2 =	0 + 8 =	9 + 4 =	8 + 5 =	7 + 6 =	6 + 7 =	8 + 0 =
7 + 6 =	3 + 5 =	0 + 7 =	10 + 6 =	9 + 4 =	9 + 0 =	8 + 5 =

go to page 19, A

A	6 + 4 =	4 + 6 =	2 + 7 =	5 + 6 =	8 + 4 =	6 + 5 =	6 + 6 =

6 or 7 correct, go to page 16, C; 5 or less, go to B

B	6 + 4 =	4 + 6 =	6 + 5 =	5 + 6 =	7 + 2 =	2 + 7 =	6 + 6 =
	6 + 6 =	7 + 2 =	2 + 7 =	2 + 6 =	6 + 4 =	5 + 6 =	6 + 5 =
	6 + 2 =	2 + 6 =	6 + 4 =	4 + 6 =	7 + 2 =	2 + 7 =	4 + 6 =
	6 + 5 =	5 + 6 =	6 + 5 =	5 + 6 =	6 + 6 =	8 + 4 =	6 + 6 =
	6 + 6 =	4 + 6 =	8 + 4 =	2 + 7 =	5 + 6 =	4 + 6 =	2 + 7 =
	2 + 7 =	5 + 6 =	4 + 6 =	6 + 5 =	8 + 4 =	6 + 6 =	8 + 4 =
	6 + 4 =	7 + 2 =	2 + 7 =	8 + 4 =	4 + 6 =	6 + 5 =	6 + 6 =
	2 + 7 =	8 + 4 =	4 + 6 =	6 + 5 =	6 + 6 =	4 + 6 =	8 + 4 =
	6 + 5 =	4 + 6 =	6 + 6 =	2 + 7 =	5 + 6 =	8 + 4 =	6 + 5 =

go to page 16, C

C	10 + 2 =	10 + 1 =	10 + 4 =	10 + 3 =	8 + 5 =	10 + 6 =	10 + 5 =

6 or 7 correct, go to page 17, A; 5 or less, go to D

D	10 + 1 =	10 + 2 =	10 + 1 =	10 + 2 =	10 + 3 =	10 + 2 =	10 + 3 =
	10 + 3 =	10 + 4 =	10 + 5 =	10 + 4 =	10 + 3 =	10 + 6 =	10 + 6 =
	10 + 5 =	10 + 3 =	10 + 6 =	10 + 3 =	10 + 5 =	10 + 4 =	10 + 2 =
	10 + 6 =	10 + 2 =	10 + 1 =	10 + 5 =	10 + 4 =	10 + 3 =	10 + 6 =
	10 + 1 =	10 + 3 =	10 + 5 =	10 + 2 =	10 + 6 =	10 + 4 =	10 + 3 =
	10 + 2 =	10 + 6 =	10 + 4 =	8 + 4 =	10 + 5 =	8 + 4 =	10 + 6 =
	10 + 1 =	10 + 3 =	10 + 6 =	8 + 5 =	10 + 4 =	10 + 2 =	10 + 5 =
	10 + 2 =	10 + 6 =	10 + 3 =	10 + 5 =	10 + 3 =	10 + 6 =	10 + 4 =

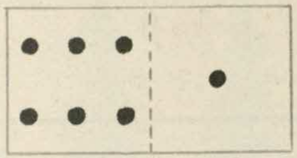
go to page 17, A

A

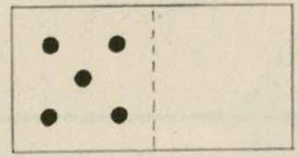
3 + 1 =	3 + 0 =	2 + 3 =	3 + 2 =	4 + 0 =	0 + 4 =	0 + 3 =
8 + 2 =	5 + 0 =	0 + 5 =	7 + 3 =	6 + 0 =	6 + 5 =	0 + 6 =
9 + 0 =	4 + 4 =	9 + 4 =	8 + 0 =	0 + 7 =	7 + 7 =	0 + 0 =

19, 20 or 21 correct, go to page 20, A; 18 or less, go to B

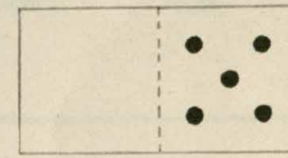
B



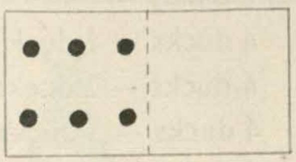
6 + 1 =



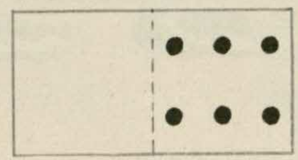
5 + 0 =



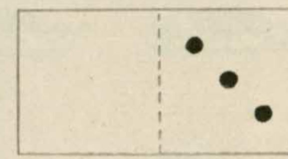
0 + 5 =



6 + 0 =



0 + 6 =

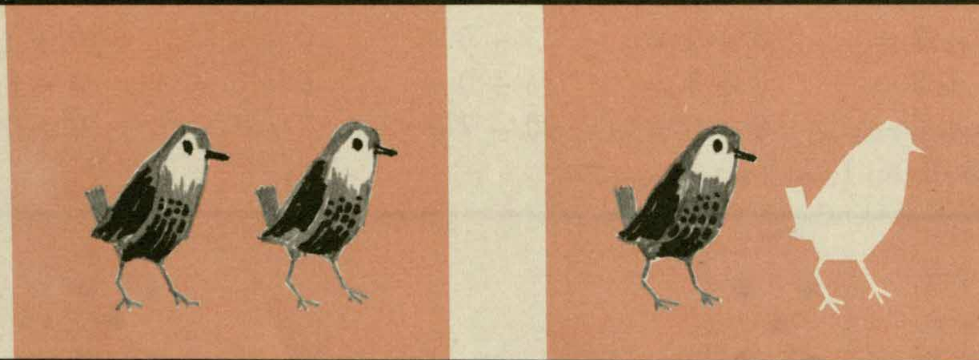


0 + 3 =

1 + 1 =	1 + 0 =	0 + 1 =	2 + 1 =	1 + 2 =	2 + 0 =	0 + 2 =
3 + 0 =	0 + 3 =	2 + 4 =	5 + 2 =	2 + 5 =	6 + 0 =	0 + 6 =
10 + 2 =	3 + 4 =	0 + 4 =	4 + 3 =	10 + 3 =	3 + 6 =	7 + 4 =
4 + 5 =	6 + 6 =	2 + 7 =	0 + 8 =	5 + 6 =	8 + 2 =	10 + 5 =
3 + 7 =	8 + 3 =	9 + 2 =	10 + 6 =	6 + 7 =	8 + 4 =	7 + 6 =
9 + 3 =	3 + 5 =	9 + 0 =	9 + 4 =	8 + 5 =	0 + 10 =	8 + 5 =
3 + 0 =	0 + 3 =	0 + 7 =	8 + 3 =	10 + 6 =	7 + 0 =	8 + 0 =
6 + 6 =	6 + 0 =	10 + 4 =	0 + 8 =	7 + 6 =	6 + 7 =	9 + 4 =
5 + 0 =	5 + 6 =	4 + 0 =	7 + 4 =	0 + 9 =	2 + 7 =	0 + 6 =

go to page 20, A

A



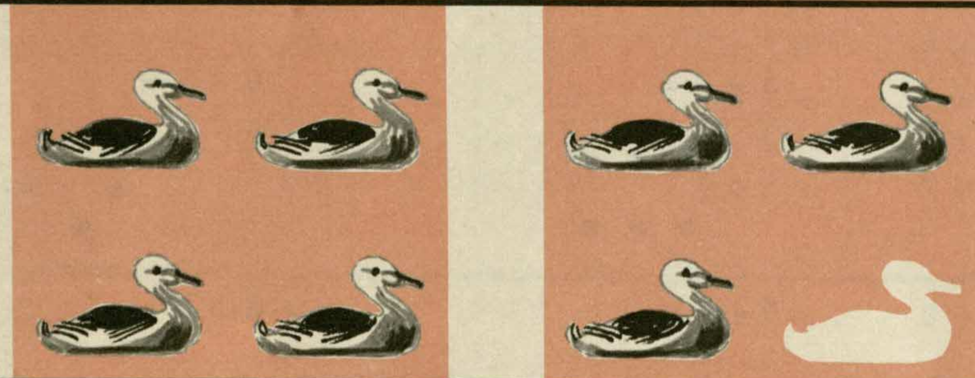
Take away –

2 birds – 1 bird = ... bird

2 birds – 2 birds = ... birds

go to B

B



Take away –

4 ducks – 1 duck = ... ducks

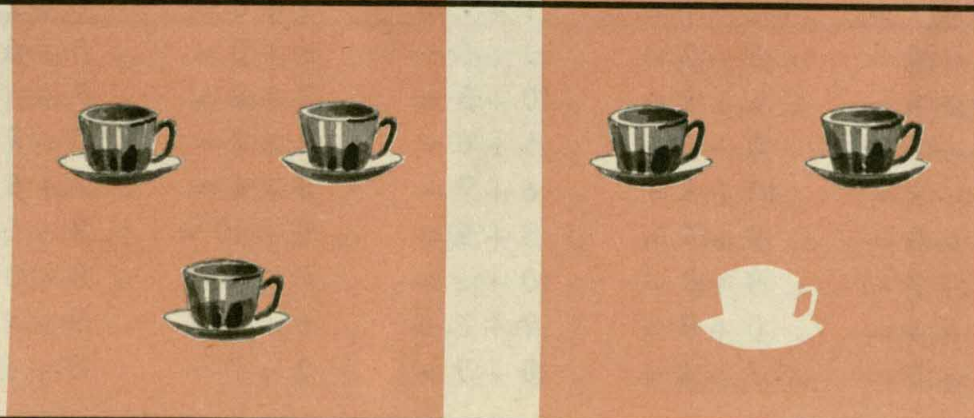
4 ducks – 2 ducks = ... ducks

4 ducks – 3 ducks = ... duck

4 ducks – 4 ducks = ... ducks

go to C

C



Take away –

3 cups – 1 cup = ... cups

3 cups – 2 cups = ... cup

3 cups – 3 cups = ... cups

go to page 21, A

A



3 – 1 =

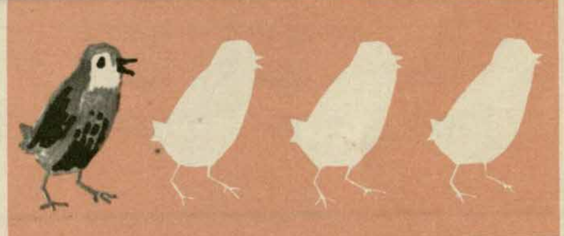


3 – 2 =

B

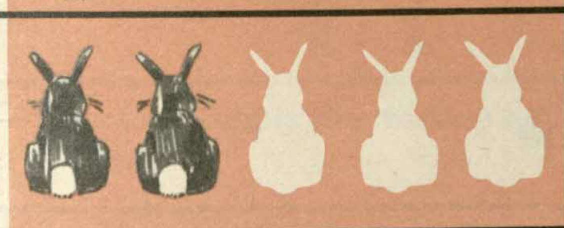


4 – 1 =

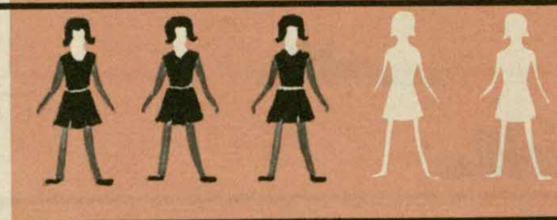


4 – 3 =

C

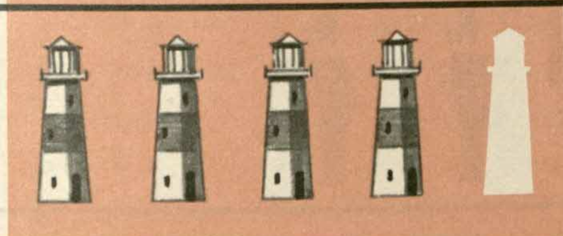


5 – 3 =

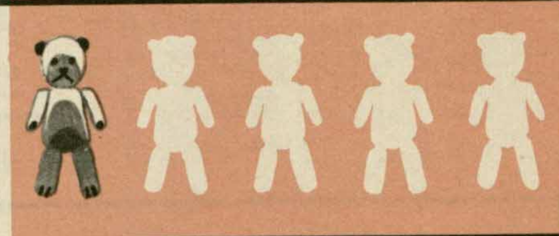


5 – 2 =

D



5 – 1 =

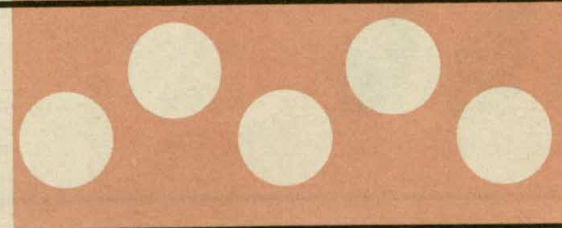


5 – 4 =

E



3 – 3 =

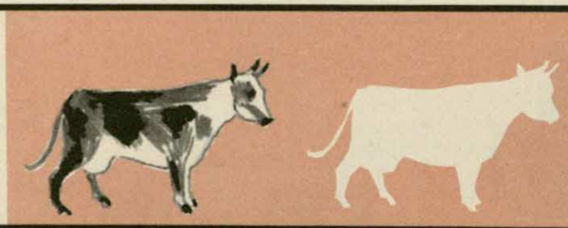


5 – 5 =

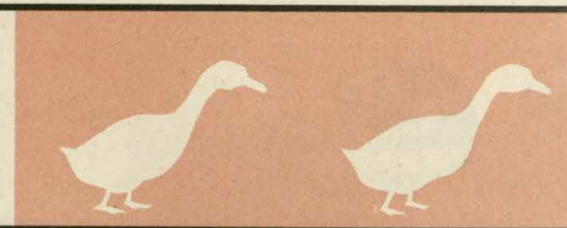
go to page 22, A

Make your own sums

A

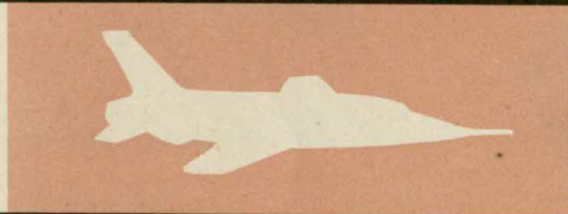


..... – ..... = ...



..... – ..... = ...

B

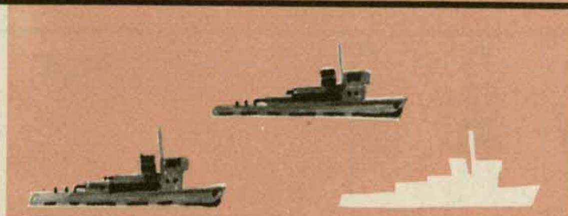


..... – ..... = ...



..... – ..... = ...

C

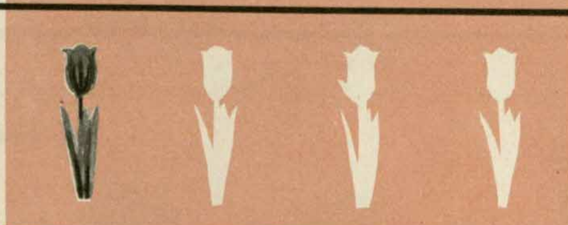


..... – ..... = ...

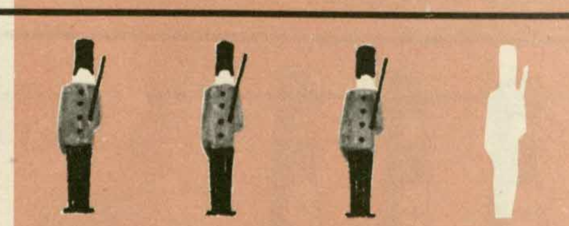


..... – ..... = ...

D

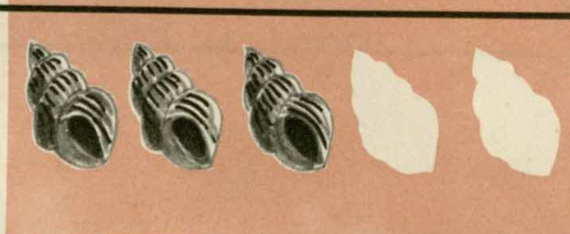


..... – ..... = ...

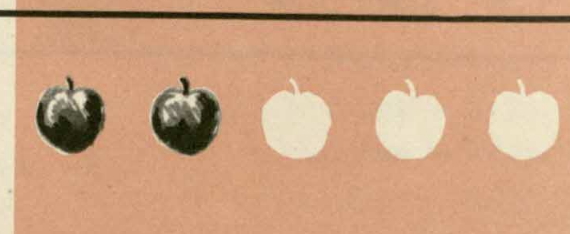


..... – ..... = ...

E



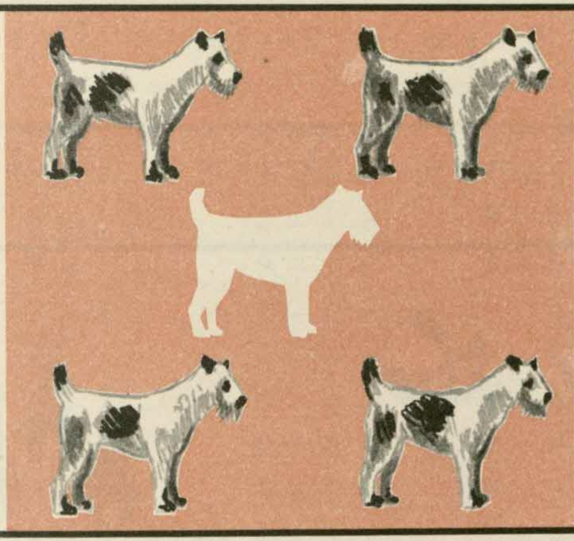
..... – ..... = ...



..... – ..... = ...

go to page 23, A

A



Take away –

5 dogs – 1 dog = ...dogs
5 dogs – 2 dogs = ...dogs
5 dogs – 3 dogs = ...dogs
5 dogs – 4 dogs = ...dog
5 dogs – 5 dogs = ...dogs

go to B

B **Practice: supply the missing figures**

2 – 1 =	2 – = 1	1 + 1 =	2 – 1 =	2 + 1 =	3 – 2 =	3 – 1 =
3 – = 2	3 – = 1	2 + = 3	1 + = 3	3 – 2 =	2 – 1 =	4 = 3 +
4 = 1 +	3 + = 4	1 + = 4	4 – 1 =	4 – 3 =	4 – = 3	4 – = 1
2 + 2 =	2 + = 4	4 – = 2	4 – 2 =	3 – 1 =	3 – 2 =	4 – 3 =
5 = 3 +	5 – 3 =	5 = 2 +	5 – 2 =	2 + = 5	3 + = 5	5 = 2 +
5 – 2 =	4 – 2 =	5 – 3 =	5 = 4 +	5 – 4 =	5 = 1 +	5 – 1 =
2 – 1 =	3 – 2 =	5 – 4 =	5 – 3 =	4 – 3 =	4 – 2 =	5 – 3 =
5 – 2 =	4 – 1 =	5 – 3 =	4 – 2 =	5 – 3 =	4 – 3 =	5 – 1 =
4 – 2 =	5 – 4 =	5 – 2 =	3 – 2 =	5 – 3 =	5 – 2 =	4 – 3 =
5 = 4 +	5 = 3 +	5 – 3 =	5 – 2 =	4 = 2 +	4 – 2 =	4 – 1 =
3 – 3 =	2 – 2 =	5 – 4 =	5 – 1 =	3 – 2 =	5 = 1 +	5 – 1 =
4 = 3 +	4 – 3 =	4 – 1 =	5 – 2 =	5 – 3 =	4 – 2 =	5 – 3 =

go to page 24, A

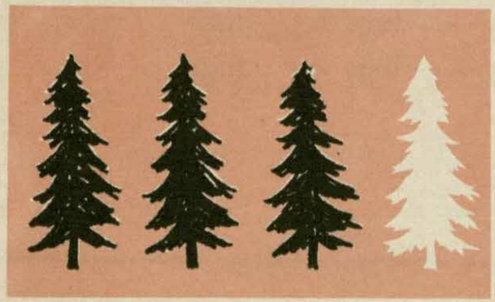
A 2 − 1 = 4 − 1 = 3 − 1 = 5 − 1 = 7 − 1 = 6 − 1 = 1 − 1 =

6 or 7 correct, go to B; 5 or less, practise with apparatus, then go to B

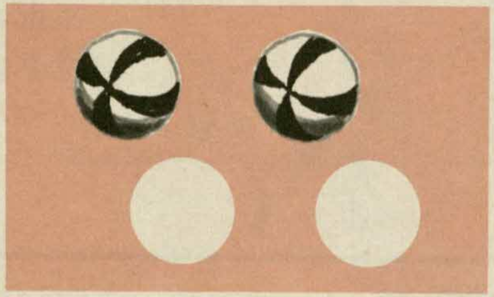
B 3 − 2 = 5 − 4 = 4 − 2 = 4 − 3 = 5 − 2 = 2 − 2 = 5 − 3 =

6 or 7 correct, go to page 25, A; 5 or less, go to C

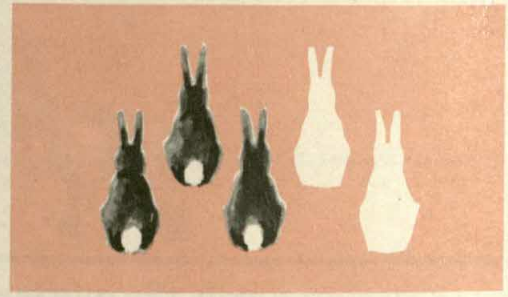
C



4 − 1 =



4 − 2 =



5 − 2 =

1	2	3	4	5	6	7	8	9

2 − 1 =	3 − 1 =	3 − 2 =	4 − 1 =	4 − 3 =	5 − 1 =	5 − 4 =
5 − 2 =	5 − 3 =	5 − 1 =	4 − 2 =	3 − 1 =	2 − 1 =	4 − 2 =
3 − 2 =	4 − 3 =	5 − 4 =	5 − 2 =	5 − 3 =	5 − 4 =	5 − 3 =
5 − 4 =	4 − 2 =	5 − 3 =	4 − 1 =	5 − 2 =	4 − 3 =	5 − 2 =
4 − 1 =	4 − 3 =	3 − 1 =	3 − 2 =	2 − 1 =	5 − 1 =	5 − 4 =
5 − 3 =	3 − 2 =	5 − 4 =	5 − 2 =	4 − 3 =	5 − 3 =	4 − 2 =
2 = 1 +	2 − 1 =	3 = 2 +	3 − 2 =	3 − 1 =	4 = 2 +	4 − 2 =
5 = 4 +	5 − 4 =	5 − 1 =	5 = 3 +	5 − 2 =	5 − 3 =	5 − 5 =
2 − 2 =	5 − 3 =	5 − 5 =	4 − 4 =	4 − 2 =	3 − 1 =	5 − 3 =

go to page 26, A

A **Complete:**

1	2	3	4	5	6	7	8	9

$6 = 5 +$	$6 = 1 +$	$6 = 4 +$	$6 - 4 =$	$6 = 2 +$	$6 = 3 +$	$6 - 3 =$
$7 = 6 +$	$7 = 1 +$	$7 - 6 =$	$7 = 5 +$	$7 = 2 +$	$7 - 5 =$	$7 - 2 =$
$8 = 7 +$	$8 = 1 +$	$8 - 1 =$	$8 - 7 =$	$8 = 6 +$	$8 - 6 =$	$8 - 2 =$
$9 = 8 +$	$9 = 1 +$	$9 - 1 =$	$9 - 8 =$	$7 = 4 +$	$7 = 3 +$	$7 - 3 =$
$7 - 4 =$	$7 - 3 =$	$7 - 5 =$	$7 - 5 =$	$6 = 3 +$	$6 - 3 =$	$6 - 5 =$
$8 = 2 +$	$8 - 2 =$	$8 - 6 =$	$8 = 5 +$	$8 = 3 +$	$8 - 3 =$	$8 - 5 =$
$6 - 4 =$	$6 - 2 =$	$8 = 4 +$	$8 - 4 =$	$7 = 4 +$	$7 - 4 =$	$7 - 3 =$
$8 = 3 +$	$8 - 3 =$	$8 - 5 =$	$9 - 8 =$	$9 - 1 =$	$6 = 3 +$	$6 - 3 =$
$8 = 4 +$	$8 - 4 =$	$9 = 8 +$	$9 = 1 +$	$7 = 5 +$	$7 = 2 +$	$8 = 5 +$
$8 = 5 +$	$8 - 5 =$	$8 - 3 =$	$7 = 4 +$	$7 = 3 +$	$7 - 4 =$	$7 - 5 =$

go to B

B **Practice:**

$6 - 2 =$	$6 - 4 =$	$7 - 2 =$	$7 - 5 =$	$6 - 3 =$	$6 - 5 =$	$6 - 1 =$
$7 - 4 =$	$7 - 3 =$	$8 - 1 =$	$8 - 7 =$	$8 - 2 =$	$8 - 6 =$	$7 - 6 =$
$8 - 4 =$	$8 - 3 =$	$8 - 5 =$	$9 - 1 =$	$9 - 8 =$	$6 - 2 =$	$7 - 5 =$
$6 - 4 =$	$6 - 3 =$	$6 - 2 =$	$7 - 2 =$	$7 - 3 =$	$6 - 5 =$	$7 - 4 =$
$6 - 1 =$	$7 - 2 =$	$7 - 4 =$	$6 - 3 =$	$7 - 5 =$	$6 - 4 =$	$8 - 1 =$
$6 - 5 =$	$7 - 3 =$	$8 - 7 =$	$8 - 6 =$	$7 - 4 =$	$8 - 2 =$	$7 - 6 =$
$8 - 7 =$	$8 - 4 =$	$8 - 2 =$	$7 - 6 =$	$8 - 6 =$	$8 - 3 =$	$7 - 3 =$
$8 - 3 =$	$9 - 1 =$	$7 - 3 =$	$8 - 5 =$	$8 - 4 =$	$9 - 8 =$	$8 - 5 =$
$8 - 4 =$	$7 - 4 =$	$9 - 8 =$	$8 - 3 =$	$9 - 1 =$	$8 - 5 =$	$9 - 8 =$
$8 - 6 =$	$6 - 3 =$	$7 - 5 =$	$7 - 3 =$	$8 - 5 =$	$7 - 2 =$	$7 - 4 =$

go to page 26, C

A

3 − 2 =	4 − 2 =	5 − 2 =	5 − 3 =	5 − 1 =	5 − 4 =	4 − 3 =

6 or 7 correct, go to page 25, A; 5 or less, go to B

B

3 − 1 =	3 − 2 =	4 − 1 =	4 − 3 =	5 − 2 =	5 − 3 =	4 − 2 =
••/		•••/		•••//		••//
5 − 1 =	5 − 4 =	5 − 2 =	4 − 2 =	3 − 1 =	3 − 2 =	5 − 2 =
3 − 2 =	4 − 3 =	5 − 3 =	5 − 1 =	5 − 2 =	5 − 4 =	5 − 3 =
4 − 2 =	5 − 4 =	4 − 3 =	3 − 2 =	5 − 4 =	4 − 3 =	5 − 2 =
3 − 2 =	5 − 3 =	5 − 2 =	4 − 3 =	5 − 3 =	5 − 4 =	4 − 2 =
5 − 2 =	5 − 1 =	5 − 4 =	5 − 3 =	4 − 2 =	5 − 2 =	5 − 3 =
4 − 3 =	5 − 3 =	5 − 2 =	5 − 4 =	3 − 2 =	5 − 1 =	4 − 2 =

go to page 25, A

C

6 − 2 =	7 − 2 =	7 − 5 =	6 − 3 =	6 − 4 =	6 − 5 =	6 − 1 =

6 or 7 correct, go to E; 5 or less, go to D

D

6 = 4 +	6 = 2 +	6 − 2 =	6 − 4 =	6 = 2 +	6 − 2 =	6 − 4 =
7 = 2 +	7 − 2 =	7 = 5 +	7 − 5 =	7 − 2 =	7 = 5 +	7 − 5 =
6 = 3 +	6 − 3 =	6 = 3 +	6 − 3 =	6 − 4 =	6 − 2 =	7 − 2 =
6 = 4 +	6 = 5 +	6 − 5 =	6 = 1 +	6 − 1 =	6 − 5 =	6 − 1 =
7 − 2 =	7 − 5 =	6 − 4 =	6 − 2 =	6 − 5 =	6 − 1 =	6 − 3 =
6 − 1 =	6 − 3 =	6 − 5 =	6 − 2 =	7 − 2 =	6 − 4 =	7 − 5 =
7 − 5 =	6 − 5 =	6 − 2 =	7 − 2 =	6 − 4 =	7 − 5 =	6 − 3 =

go to page 28, A

E

8 − 1 =	7 − 3 =	7 − 6 =	8 − 7 =	7 − 4 =	8 − 2 =	8 − 6 =

6 or 7 correct, go to page 27, B; 5 or less, go to page 27, A

A

8 = 7 +	8 − 7 =	8 − 1 =	7 = 4 +	7 − 4 =	7 = 3 +	7 − 3 =
7 − 4 =	7 − 3 =	8 − 7 =	8 − 1 =	8 = 6 +	8 − 6 =	8 − 2 =
7 − 6 =	7 − 4 =	8 − 7 =	7 − 3 =	8 − 1 =	8 − 2 =	7 − 4 =
7 − 3 =	8 − 1 =	7 − 6 =	7 − 4 =	8 − 7 =	7 − 3 =	7 − 1 =
8 − 6 =	7 − 4 =	7 − 3 =	8 − 2 =	7 − 3 =	7 − 4 =	8 − 6 =
7 − 4 =	8 − 7 =	8 − 6 =	8 − 1 =	7 − 3 =	8 − 2 =	7 − 4 =
7 − 3 =	8 − 6 =	7 − 4 =	8 − 2 =	7 − 4 =	8 − 7 =	7 − 3 =

go to page 28, C

B

9 − 1 =	9 − 8 =	8 − 5 =	8 − 2 =	8 − 4 =	8 − 7 =	8 − 3 =

6 or 7 correct, go to D; 5 or less, go to C

C

9 = 8 +	9 = 1 +	9 − 8 =	9 − 1 =	8 = 4 +	8 − 4 =	9 − 8 =
8 = 5 +	8 − 5 =	8 = 3 +	8 − 3 =	8 − 7 =	8 − 2 =	8 − 3 =
8 − 5 =	9 − 8 =	8 − 4 =	9 − 1 =	8 − 3 =	9 − 8 =	8 − 4 =
8 − 4 =	8 − 5 =	8 − 3 =	9 − 8 =	8 − 5 =	9 − 1 =	8 − 3 =
8 − 5 =	9 − 1 =	8 − 4 =	8 − 3 =	9 − 8 =	8 − 5 =	8 − 4 =
8 − 4 =	8 − 3 =	9 − 8 =	9 − 1 =	8 − 5 =	8 − 4 =	8 − 3 =

go to page 30, A

D

4 + 3 =	2 + 7 =	6 + 4 =	4 + 6 =	1 + 0 =	5 + 0 =	6 + 3 =
4 − 2 =	5 − 3 =	6 − 3 =	5 − 2 =	7 − 5 =	6 − 4 =	7 − 3 =
7 + 3 =	3 + 7 =	6 + 6 =	6 + 7 =	8 + 0 =	8 + 3 =	9 + 0 =
8 − 4 =	7 − 2 =	8 − 3 =	8 − 6 =	7 − 4 =	9 − 8 =	8 − 5 =

go to page 29, A

A	6 − 1 =	6 − 5 =	7 − 2 =	6 − 4 =	7 − 5 =	6 − 3 =	6 − 2 =

6 or 7 correct, go to page 26, E; 5 or less, go to B

B	* * * * * *	6 − 4 =	6 = 4 +	6 = 2 +	6 − 2 =	6 − 5 =	6 − 1 =
	* * * * * * *	7 = 5 +	7 − 5 =	7 = 2 +	7 − 2 =	7 − 5 =	7 − 2 =
	6 = 3 +	6 − 3 =	6 = 2 +	6 − 2 =	6 = 4 +	6 − 4 =	6 − 3 =
	6 = 5 +	6 − 5 =	6 = 1 +	6 − 1 =	6 − 5 =	6 − 3 =	6 − 1 =
	6 − 4 =	6 − 2 =	6 − 1 =	6 − 5 =	6 − 3 =	7 = 5 +	7 − 5 =
	7 = 2 +	7 − 2 =	7 = 5 +	7 − 5 =	7 − 2 =	7 − 5 =	6 − 3 =
	6 − 1 =	6 − 3 =	7 − 2 =	6 − 4 =	6 − 5 =	6 − 2 =	7 − 5 =
	7 − 5 =	6 − 2 =	6 − 5 =	6 − 3 =	6 − 1 =	6 − 4 =	7 − 2 =

go to page 26, E

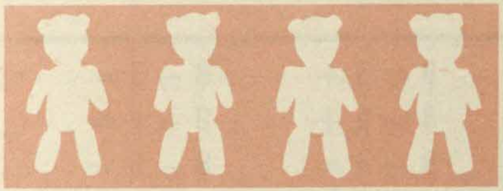
C	7 − 6 =	8 − 1 =	7 − 4 =	8 − 2 =	8 − 6 =	8 − 7 =	7 − 3 =

6 or 7 correct, go to page 27, B; 5 or less, go to D

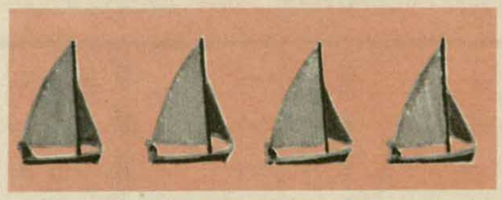
D	* * * * * * *	7 = 6 +	7 = 1 +	7 − 1 =	7 − 6 =	7 = 4 +	7 = 3 +
	7 − 4 =	7 − 3 =	7 − 1 =	7 − 6 =	7 − 3 =	7 − 6 =	7 − 4 =
	* * * * * * * *	8 = 6 +	8 − 6 =	8 = 2 +	8 − 2 =	8 − 1 =	8 − 7 =
	8 − 6 =	8 − 2 =	7 − 4 =	7 − 3 =	7 − 6 =	7 − 1 =	8 − 6 =
	7 − 3 =	7 − 6 =	8 − 1 =	7 − 4 =	8 − 2 =	7 − 3 =	7 − 6 =
	7 − 4 =	8 − 2 =	7 − 3 =	8 − 7 =	7 − 4 =	8 − 6 =	7 − 4 =
	7 − 6 =	7 − 3 =	8 − 1 =	7 − 4 =	8 − 2 =	7 − 3 =	8 − 1 =
	8 − 2 =	7 − 4 =	7 − 3 =	8 − 6 =	7 − 3 =	8 − 2 =	7 − 4 =
	7 − 3 =	7 − 5 =	8 − 2 =	7 − 4 =	7 − 6 =	8 − 7 =	8 − 6 =

go to page 27, B

A Take away −



4 − 4 =



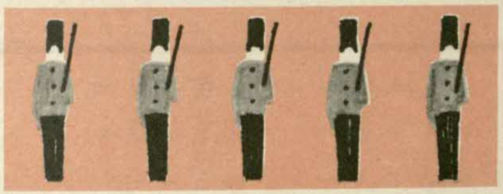
4 − 0 =



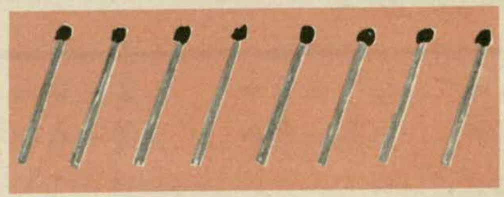
6 − 6 =



6 − 0 =



5 − 0 =



8 − 0 =

go to B

B Practice:

1 − 1 =	1 − 0 =	2 − 2 =	2 − 1 =	2 − 0 =	4 − 0 =	4 − 4 =
3 − 2 =	3 − 0 =	3 − 3 =	1 − 0 =	6 − 0 =	6 − 6 =	5 − 5 =
2 − 0 =	4 − 0 =	2 − 2 =	5 − 5 =	4 − 4 =	3 − 0 =	3 − 3 =
6 − 6 =	5 − 5 =	6 − 0 =	4 − 0 =	7 − 0 =	7 − 7 =	6 − 6 =
8 − 0 =	7 − 0 =	7 − 7 =	8 − 8 =	9 − 9 =	9 − 0 =	8 − 0 =
7 − 0 =	9 − 9 =	9 − 0 =	8 − 0 =	5 − 5 =	7 − 0 =	6 − 0 =

go to page 30, C

A	8 − 6 =	9 − 1 =	8 − 3 =	8 − 5 =	9 − 8 =	8 − 2 =	8 − 4 =

6 or 7 correct, go to page 29, A; 5 or less, go to B

B	9 = 1 +	9 − 1 =	9 = 8 +	9 − 8 =	8 = 3 +	8 − 3 =	8 − 5 =
	8 = 5 +	8 − 5 =	8 − 3 =	9 − 1 =	8 = 4 +	8 − 4 =	9 − 8 =
	8 − 5 =	9 − 1 =	8 − 5 =	9 − 8 =	8 − 3 =	8 − 5 =	8 − 4 =
	9 − 8 =	8 − 5 =	8 − 4 =	9 − 9 =	8 − 5 =	9 − 8 =	8 − 3 =
	8 − 3 =	8 − 8 =	8 − 0 =	8 − 5 =	9 − 8 =	8 − 4 =	8 − 5 =
	8 − 4 =	8 − 5 =	8 − 3 =	9 − 1 =	8 − 4 =	8 − 3 =	9 − 0 =
	8 − 6 =	9 − 8 =	8 − 5 =	8 − 6 =	8 − 3 =	8 − 5 =	8 − 4 =
	8 − 2 =	8 − 3 =	8 − 4 =	8 − 5 =	8 − 4 =	8 − 3 =	8 − 5 =

go to page 29, A

C	1 − 1 =	1 − 0 =	2 − 0 =	2 − 2 =	6 − 0 =	4 − 0 =	6 − 6 =
	7 − 7 =	8 − 8 =	7 − 0 =	9 − 0 =	4 − 4 =	5 − 0 =	9 − 9 =

12, 13 or 14 correct, go to page 31, A; 11 or less, go to D

D	1 − 1 =	1 − 0 =	2 − 2 =	2 − 0 =	6 − 0 =	6 − 6 =	4 − 0 =
	•		••		••••••		••••
	2 − 0 =	4 − 0 =	3 − 0 =	2 − 2 =	3 − 3 =	4 − 4 =	1 − 0 =
	2 − 2 =	1 − 1 =	6 − 6 =	6 − 0 =	2 − 0 =	6 − 6 =	2 − 2 =
	4 − 0 =	2 − 0 =	4 − 0 =	2 − 0 =	1 − 1 =	6 − 0 =	4 − 0 =
	3 − 3 =	6 − 6 =	2 − 2 =	6 − 0 =	4 − 0 =	4 − 4 =	2 − 0 =
	5 − 0 =	5 − 5 =	7 − 7 =	7 − 0 =	9 − 0 =	9 − 9 =	8 − 8 =
	7 − 0 =	8 − 0 =	9 − 9 =	8 − 8 =	6 − 6 =	5 − 0 =	9 − 0 =
	3 − 3 =	4 − 0 =	7 − 0 =	5 − 5 =	8 − 0 =	9 − 0 =	7 − 7 =

go to page 32, A

A **Complete:**

2 = 1 +	2 − 1 =	2 = 2 +	2 − 2 =	2 − 0 =	3 = 2 +	3 − 2 =
3 = 1 +	3 − 1 =	3 − 3 =	3 − 0 =	4 = 2 +	4 − 2 =	4 = 3 +
4 − 3 =	4 − 1 =	5 = 3 +	5 − 2 =	5 − 3 =	5 − 4 =	5 − 2 =
6 = 4 +	6 = 3 +	6 = 1 +	6 = 5 +	6 − 3 =	7 = 5 +	7 = 3 +
7 − 4 =	7 − 3 =	7 − 5 =	7 = 2 +	8 = 5 +	8 = 4 +	8 − 3 =
9 = 9 +	7 − 0 =	7 − 7 =	5 − 5 =	5 − 0 =	8 − 2 =	8 = 6 +
2 − 2 =	3 − 0 =	8 − 5 =	8 − 3 =	9 − 9 =	9 − 0 =	6 − 3 =
7 = 5 +	7 − 2 =	7 − 3 =	8 = 4 +	8 − 6 =	7 = 4 +	8 − 8 =

go to B

B **Revision:**

2 − 1 =	2 − 2 =	2 − 0 =	3 − 0 =	3 − 3 =	4 − 4 =	5 − 5 =
3 − 2 =	4 − 2 =	4 − 3 =	4 − 1 =	5 − 2 =	5 − 3 =	6 − 6 =
7 − 0 =	6 − 4 =	6 − 2 =	6 − 3 =	4 − 2 =	8 − 4 =	5 − 2 =
8 − 8 =	6 − 3 =	7 − 6 =	5 − 3 =	7 − 5 =	7 − 2 =	6 − 3 =
5 − 3 =	5 − 5 =	6 − 4 =	4 − 0 =	5 − 2 =	6 − 0 =	7 − 6 =
4 − 2 =	7 − 7 =	4 − 4 =	6 − 3 =	3 − 0 =	6 − 2 =	7 − 5 =
6 − 4 =	7 − 6 =	7 − 2 =	7 − 5 =	5 − 3 =	7 − 1 =	7 − 4 =
5 − 2 =	7 − 3 =	7 − 4 =	7 − 6 =	7 − 2 =	6 − 3 =	7 − 3 =
8 − 0 =	6 − 2 =	8 − 6 =	8 − 2 =	7 − 1 =	7 − 5 =	8 − 6 =
7 − 3 =	8 − 2 =	9 − 1 =	7 − 4 =	8 − 6 =	8 − 2 =	9 − 0 =
9 − 8 =	7 − 4 =	8 − 4 =	9 − 9 =	8 − 7 =	8 − 5 =	8 − 1 =
8 − 5 =	8 − 3 =	8 − 0 =	8 − 4 =	8 − 3 =	9 − 0 =	8 − 5 =
9 − 1 =	9 − 0 =	7 − 3 =	8 − 5 =	6 − 6 =	6 − 3 =	8 − 0 =

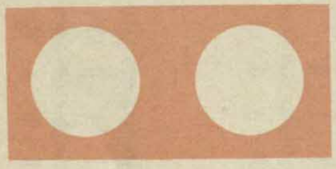
go to page 33, A

A

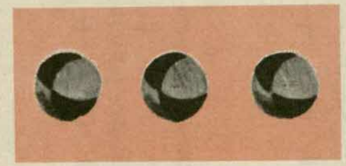
1 – 0 =	1 – 1 =	2 – 2 =	4 – 4 =	4 – 0 =	2 – 0 =	3 – 3 =
7 – 7 =	7 – 0 =	9 – 0 =	5 – 0 =	6 – 6 =	8 – 0 =	9 – 9 =

12, 13 or 14 correct, go to page 31, A; 11 or less, go to B

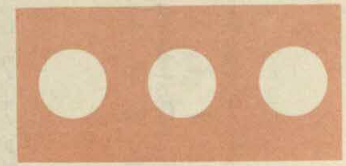
B



2 – 2 =



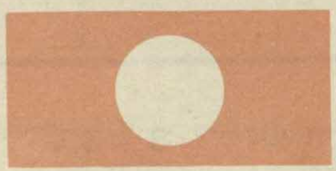
3 – 0 =



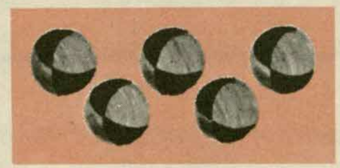
3 – 3 =



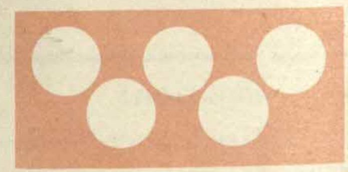
1 – 0 =



1 – 1 =



5 – 0 =



5 – 5 =

2 – 1 =	2 – 0 =	2 – 2 =	3 – 1 =	3 – 2 =	3 – 3 =	3 – 0 =
4 – 1 =	4 – 3 =	4 – 0 =	4 – 4 =	5 – 2 =	5 – 3 =	5 – 0 =
5 – 5 =	6 – 6 =	7 – 7 =	8 – 8 =	9 – 9 =	10 – 10 =	10 – 1 =
4 – 0 =	6 – 0 =	5 – 0 =	9 – 0 =	9 – 9 =	8 – 0 =	7 – 0 =
6 – 6 =	7 – 0 =	8 – 0 =	9 – 9 =	8 – 8 =	5 – 0 =	4 – 4 =
2 – 2 =	3 – 0 =	1 – 1 =	6 – 6 =	9 – 0 =	4 – 0 =	7 – 7 =
1 – 0 =	4 – 4 =	4 – 0 =	2 – 2 =	3 – 3 =	6 – 0 =	5 – 0 =
3 – 0 =	8 – 0 =	5 – 5 =	7 – 7 =	9 – 0 =	1 – 1 =	7 – 0 =
8 – 8 =	4 – 0 =	7 – 0 =	5 – 0 =	6 – 6 =	8 – 0 =	9 – 9 =

go to page 31, A

A

3 − 1 =	3 − 0 =	4 − 2 =	6 − 6 =	7 − 4 =	5 − 3 =	8 − 4 =
9 − 1 =	7 − 7 =	8 − 6 =	8 − 0 =	7 − 2 =	8 − 5 =	9 − 9 =

12, 13 or 14 correct, go to C; 11 or less, go to B

B

1 − 1 =	1 − 0 =	2 − 2 =	2 − 0 =	3 − 1 =	3 − 2 =	4 − 0 =
4 − 4 =	5 − 2 =	5 − 3 =	6 − 4 =	6 − 2 =	5 − 4 =	5 − 1 =
6 − 6 =	6 − 0 =	7 − 5 =	7 − 2 =	6 − 3 =	7 − 4 =	7 − 3 =
4 − 3 =	6 − 3 =	5 − 2 =	6 − 4 =	7 − 2 =	5 − 3 =	6 − 2 =
5 − 2 =	7 − 5 =	8 − 1 =	6 − 3 =	7 − 4 =	8 − 8 =	6 − 4 =
6 − 3 =	7 − 4 =	5 − 3 =	8 − 2 =	8 − 6 =	9 − 0 =	7 − 3 =
5 − 3 =	6 − 2 =	8 − 6 =	9 − 1 =	5 − 2 =	8 − 3 =	8 − 5 =
6 − 4 =	8 − 2 =	7 − 3 =	8 − 3 =	9 − 8 =	7 − 0 =	9 − 9 =
7 − 2 =	8 − 5 =	8 − 4 =	9 − 1 =	8 − 4 =	8 − 5 =	9 − 8 =

go to page 34, A

C **Revision:**

5 + 3 =	3 + 5 =	4 + 7 =	2 + 5 =	6 + 2 =	2 + 6 =	6 + 3 =
3 + 7 =	6 + 4 =	4 + 6 =	7 + 0 =	3 + 6 =	6 + 5 =	5 + 6 =
4 + 6 =	6 + 6 =	5 + 5 =	8 + 1 =	5 + 6 =	7 + 5 =	5 + 7 =
8 + 2 =	9 + 0 =	8 + 3 =	5 + 7 =	6 + 6 =	7 + 4 =	3 + 6 =
5 + 7 =	6 + 4 =	4 + 5 =	8 + 2 =	5 + 4 =	8 + 3 =	2 + 6 =
2 + 7 =	0 + 5 =	8 + 0 =	8 + 4 =	0 + 6 =	7 + 6 =	6 + 7 =
7 + 6 =	6 + 7 =	7 + 2 =	4 + 5 =	6 + 7 =	8 + 4 =	2 + 7 =
7 + 3 =	9 + 3 =	10 + 2 =	9 + 2 =	10 + 3 =	9 + 4 =	10 + 5 =
10 + 4 =	8 + 5 =	9 + 4 =	10 + 6 =	7 + 7 =	8 + 4 =	9 + 3 =

go to page 34, C

A

3 − 2 =	2 − 2 =	4 − 0 =	5 − 5 =	5 − 2 =	3 − 0 =	6 − 3 =
9 − 0 =	6 − 4 =	8 − 3 =	9 − 9 =	7 − 5 =	7 − 3 =	8 − 5 =

12, 13 or 14 correct, go to page 33, C; 11 or less, go to B

B

4 = 4 +	4 = 0 +	4 − 0 =	4 − 4 =	5 − 5 =	5 − 0 =	4 − 2 =
5 = 3 +	5 − 3 =	5 = 2 +	5 − 2 =	6 = 3 +	6 − 3 =	4 − 3 =
6 − 4 =	6 − 2 =	3 − 3 =	6 − 6 =	6 − 0 =	7 − 5 =	7 − 2 =
4 − 2 =	5 − 4 =	6 − 3 =	5 − 3 =	7 − 0 =	5 − 2 =	7 − 4 =
8 − 7 =	8 − 1 =	9 − 1 =	8 − 5 =	8 − 6 =	8 − 2 =	8 − 3 =
7 − 3 =	7 − 4 =	8 − 3 =	7 − 2 =	9 − 9 =	8 − 0 =	9 − 1 =
8 − 5 =	8 − 4 =	7 − 3 =	7 − 6 =	7 − 1 =	7 − 4 =	8 − 6 =
7 − 2 =	6 − 4 =	8 − 3 =	7 − 4 =	5 − 5 =	6 − 0 =	9 − 9 =

go to page 33, C

C

6 + 1 =	3 + 4 =	5 + 2 =	2 + 5 =	4 + 7 =	0 + 2 =	7 + 4 =
8 + 0 =	4 + 5 =	5 + 7 =	8 + 5 =	7 + 6 =	10 + 6 =	9 + 5 =

12, 13 or 14 correct, go to page 35, B; 11 or less, go to D

D

3 + 1 =	3 + 2 =	2 + 3 =	4 + 3 =	3 + 4 =	5 + 0 =	0 + 5 =
4 + 3 =	4 + 2 =	5 + 3 =	3 + 5 =	4 + 4 =	5 + 5 =	6 + 2 =
5 + 2 =	2 + 5 =	6 + 3 =	3 + 6 =	7 + 2 =	2 + 6 =	8 + 2 =
7 + 3 =	3 + 7 =	4 + 7 =	8 + 4 =	4 + 8 =	3 + 8 =	6 + 4 =
5 + 7 =	6 + 5 =	4 + 6 =	7 + 4 =	9 + 2 =	2 + 9 =	0 + 6 =
8 + 3 =	4 + 5 =	7 + 6 =	6 + 7 =	8 + 5 =	8 + 7 =	9 + 5 =
3 + 4 =	5 + 3 =	5 + 7 =	9 + 2 =	4 + 7 =	5 + 9 =	7 + 8 =

go to page 36, A

A

3 + 0 =	0 + 3 =	3 + 2 =	2 + 3 =	5 + 2 =	2 + 5 =	3 + 3 =
4 + 2 =	2 + 4 =	4 + 3 =	1 + 5 =	2 + 6 =	0 + 4 =	8 + 0 =
2 + 5 =	3 + 4 =	6 + 4 =	4 + 6 =	7 + 2 =	2 + 7 =	3 + 6 =
7 + 3 =	3 + 7 =	2 + 6 =	7 + 4 =	4 + 7 =	0 + 6 =	4 + 7 =
3 + 6 =	9 + 0 =	4 + 7 =	0 + 5 =	0 + 0 =	3 + 7 =	4 + 5 =
4 + 5 =	6 + 6 =	3 + 7 =	5 + 7 =	5 + 6 =	4 + 7 =	8 + 2 =
5 + 6 =	7 + 5 =	7 + 6 =	6 + 7 =	5 + 7 =	6 + 6 =	6 + 7 =
7 + 6 =	10 + 1 =	10 + 0 =	0 + 8 =	9 + 1 =	6 + 7 =	9 + 2 =
10 + 3 =	4 + 6 =	8 + 3 =	7 + 6 =	8 + 5 =	8 + 4 =	10 + 5 =
9 + 3 =	6 + 7 =	8 + 4 =	9 + 4 =	8 + 3 =	9 + 3 =	8 + 5 =

go to B

B **Practice:**

1	2	3	4	5	6	7	8	9	10	11	12

9 − 2 =	9 − 7 =	9 − 3 =	9 − 6 =	10 − 1 =	10 − 9 =	10 − 5 =
9 − 4 =	9 − 5 =	11 − 2 =	11 − 9 =	10 − 6 =	10 − 2 =	10 − 4 =
11 − 3 =	11 − 8 =	10 − 8 =	10 − 3 =	10 − 7 =	11 − 4 =	11 − 7 =
12 − 9 =	12 − 3 =	9 − 6 =	9 − 2 =	10 − 4 =	9 − 7 =	10 − 3 =
9 − 3 =	9 − 7 =	10 − 2 =	11 − 2 =	11 − 9 =	11 − 3 =	11 − 8 =
11 − 5 =	11 − 6 =	11 − 5 =	12 − 3 =	12 − 9 =	9 − 4 =	9 − 5 =
9 − 4 =	10 − 7 =	11 − 4 =	11 − 7 =	9 − 5 =	11 − 6 =	12 − 6 =
12 − 4 =	12 − 8 =	12 − 4 =	12 − 6 =	12 − 8 =	10 − 6 =	9 − 0 =
12 − 7 =	12 − 5 =	12 − 7 =	12 − 8 =	12 − 5 =	11 − 7 =	12 − 4 =
9 − 9 =	9 − 6 =	11 − 7 =	8 − 0 =	11 − 8 =	10 − 4 =	12 − 5 =

go to page 36, B

A

$6 + 0 =$	$7 + 2 =$	$2 + 7 =$	$3 + 4 =$	$5 + 3 =$	$10 + 2 =$	$10 + 0 =$
$8 + 4 =$	$5 + 6 =$	$7 + 7 =$	$9 + 3 =$	$10 + 6 =$	$7 + 6 =$	$9 + 4 =$

12, 13 or 14 correct, go to page 35, B; 11 or less, go to page 35, A

B

$9 - 2 =$	$9 - 3 =$	$9 - 6 =$	$10 - 1 =$	$9 - 7 =$	$10 - 5 =$	$10 - 9 =$

6 or 7 correct, go to D; 5 or less, go to C

C

$10 - 1 =$	$10 - 5 =$	$9 - 2 =$	$9 - 7 =$	$9 - 2 =$	$10 - 1 =$	$10 - 9 =$
$9 - 3 =$	$9 - 6 =$	$9 - 3 =$	$10 - 9 =$	$9 - 7 =$	$9 - 2 =$	$9 - 6 =$
$9 - 7 =$	$9 - 2 =$	$10 - 5 =$	$10 - 1 =$	$10 - 9 =$	$9 - 6 =$	$9 - 3 =$
$9 - 6 =$	$9 - 7 =$	$9 - 6 =$	$9 - 7 =$	$9 - 2 =$	$9 - 2 =$	$10 - 5 =$
$9 - 2 =$	$9 - 3 =$	$9 - 2 =$	$9 - 6 =$	$10 - 1 =$	$9 - 7 =$	$9 - 7 =$
$9 - 7 =$	$9 - 6 =$	$9 - 3 =$	$10 - 5 =$	$9 - 2 =$	$10 - 9 =$	$9 - 6 =$
$9 - 2 =$	$10 - 2 =$	$9 - 6 =$	$9 - 7 =$	$10 - 9 =$	$9 - 3 =$	$10 - 6 =$

go to page 38, A

D

$10 - 3 =$	$9 - 4 =$	$9 - 5 =$	$10 - 7 =$	$9 - 3 =$	$11 - 9 =$	$11 - 2 =$

6 or 7 correct, go to page 37, A; 5 or less, go to E

E

$9 = 4 +$	$9 = 5 +$	$9 - 5 =$	$9 - 4 =$	$10 = 7 +$	$11 = 9 +$	$11 - 9 =$
$10 - 3 =$	$10 - 7 =$	$10 - 3 =$	$10 - 7 =$	$11 - 9 =$	$11 - 2 =$	$11 - 2 =$
$11 - 9 =$	$10 - 3 =$	$9 - 4 =$	$9 - 4 =$	$9 - 5 =$	$9 - 5 =$	$10 - 7 =$
$9 - 4 =$	$9 - 5 =$	$9 - 5 =$	$10 - 3 =$	$10 - 7 =$	$11 - 9 =$	$11 - 9 =$
$11 - 2 =$	$11 - 2 =$	$10 - 7 =$	$9 - 4 =$	$9 - 5 =$	$11 - 2 =$	$9 - 5 =$
$10 - 3 =$	$9 - 4 =$	$11 - 2 =$	$9 - 5 =$	$11 - 9 =$	$10 - 7 =$	$9 - 3 =$
$11 - 2 =$	$10 - 7 =$	$9 - 4 =$	$9 - 3 =$	$10 - 3 =$	$9 - 5 =$	$11 - 9 =$

go to page 38, C

A

9 − 8 =	11 − 8 =	11 − 3 =	10 − 6 =	11 − 6 =	11 − 5 =	10 − 4 =

6 or 7 correct, go to C; 5 or less, go to B

B

11 = 8 +	11 = 3 +	10 = 6 +	10 = 4 +	10 − 4 =	11 = 6 +	11 = 5 +
10 − 6 =	11 − 6 =	11 − 6 =	11 − 5 =	11 − 5 =	11 − 6 =	10 − 6 =
11 − 6 =	11 − 5 =	10 − 6 =	10 − 6 =	10 − 4 =	10 − 4 =	9 − 8 =
11 − 8 =	11 − 8 =	11 − 3 =	11 − 8 =	11 − 3 =	11 − 3 =	11 − 8 =
10 − 4 =	10 − 6 =	11 − 5 =	11 − 6 =	9 − 6 =	11 − 8 =	11 − 3 =
9 − 8 =	11 − 3 =	10 − 6 =	11 − 5 =	11 − 8 =	10 − 4 =	11 − 6 =
11 − 3 =	10 − 6 =	11 − 5 =	11 − 8 =	11 − 6 =	11 − 8 =	11 − 5 =

go to page 38, E

C

12 − 9 =	12 − 3 =	11 − 7 =	12 − 6 =	11 − 4 =	12 − 4 =	12 − 8 =

6 or 7 correct, go to page 39, C; 5 or less, go to D

D

12 − 9 =	12 − 9 =	12 − 3 =	12 − 9 =	12 − 8 =	12 − 8 =	12 − 4 =
12 − 4 =	12 − 4 =	12 − 8 =	12 − 7 =	12 − 7 =	12 − 5 =	12 − 5 =
12 − 7 =	12 − 6 =	12 − 5 =	12 − 5 =	12 − 9 =	12 − 3 =	12 − 6 =
11 − 7 =	11 − 7 =	11 − 4 =	11 − 4 =	11 − 7 =	11 − 4 =	11 − 7 =
12 − 4 =	12 − 3 =	12 − 8 =	12 − 6 =	12 − 5 =	11 − 7 =	12 − 9 =
12 − 5 =	12 − 9 =	11 − 7 =	12 − 3 =	11 − 4 =	12 − 8 =	12 − 7 =
11 − 7 =	12 − 3 =	12 − 4 =	12 − 9 =	12 − 6 =	12 − 4 =	11 − 7 =
12 − 8 =	11 − 4 =	12 − 3 =	12 − 8 =	12 − 9 =	11 − 4 =	12 − 6 =
11 − 4 =	12 − 8 =	12 − 4 =	11 − 7 =	12 − 6 =	11 − 8 =	12 − 8 =
12 − 9 =	11 − 7 =	12 − 6 =	12 − 9 =	11 − 4 =	12 − 8 =	12 − 3 =

go to page 38, F

A

10 − 1 =	9 − 7 =	9 − 2 =	9 − 6 =	10 − 5 =	9 − 3 =	10 − 9 =

6 or 7 correct, go to page 36 D; 5 or less, go to B

B

10 − 5 =	9 − 2 =	9 − 7 =	9 − 2 =	9 − 7 =	9 − 7 =	10 − 1 =
9 − 2 =	10 − 1 =	9 − 3 =	9 − 6 =	9 − 6 =	9 − 3 =	10 − 9 =
9 − 3 =	9 − 3 =	9 − 6 =	9 − 7 =	10 − 9 =	9 − 7 =	9 − 2 =
9 − 2 =	9 − 7 =	9 − 7 =	9 − 3 =	10 − 5 =	9 − 6 =	9 − 6 =
9 − 7 =	10 − 1 =	9 − 7 =	9 − 2 =	9 − 2 =	9 − 3 =	10 − 9 =
9 − 3 =	9 − 6 =	9 − 6 =	9 − 7 =	9 − 7 =	9 − 6 =	9 − 2 =

go to page 36, D

C

11 − 9 =	11 − 2 =	10 − 7 =	9 − 5 =	9 − 3 =	10 − 3 =	9 − 4 =

6 or 7 correct, go to page 37, A; 5 or less, go to D

D

11 − 2 =	11 − 2 =	11 − 9 =	11 − 9 =	11 − 2 =	10 − 7 =	10 − 7 =
10 − 3 =	10 − 7 =	10 − 3 =	10 − 3 =	9 − 4 =	9 − 4 =	11 − 9 =
9 − 4 =	9 − 5 =	9 − 5 =	9 − 4 =	9 − 5 =	11 − 2 =	11 − 2 =
11 − 9 =	11 − 9 =	11 − 9 =	10 − 7 =	10 − 3 =	10 − 3 =	10 − 7 =
9 − 3 =	9 − 6 =	11 − 2 =	10 − 3 =	9 − 4 =	9 − 5 =	11 − 9 =
11 − 9 =	10 − 3 =	9 − 5 =	11 − 2 =	11 − 9 =	10 − 7 =	9 − 4 =

go to page 37, A

E

11 − 3 =	11 − 8 =	10 − 6 =	11 − 6 =	11 − 5 =	9 − 6 =	10 − 4 =

6 or 7 correct, go to page 37, C; 5 or less, go to page 39, A

F

12 − 6 =	11 − 4 =	11 − 7 =	12 − 7 =	12 − 4 =	12 − 9 =	12 − 3 =

6 or 7 correct, go to page 39, C; 5 or less, go to page 39, B

A

11 = 5 +	11 = 6 +	11 = 8 +	11 = 3 +	10 = 6 +	10 = 4 +	10 = 5 +
10 − 5 =	10 − 4 =	10 − 4 =	10 − 6 =	10 − 4 =	10 − 6 =	10 − 6 =
11 − 6 =	11 − 6 =	11 − 5 =	11 − 5 =	11 − 6 =	11 − 5 =	11 − 6 =
11 − 8 =	11 − 8 =	11 − 8 =	11 − 3 =	11 − 3 =	11 − 8 =	11 − 3 =
11 − 5 =	10 − 5 =	10 − 6 =	11 − 6 =	11 − 5 =	11 − 3 =	11 − 5 =
10 − 4 =	11 − 8 =	11 − 5 =	11 − 3 =	10 − 4 =	11 − 6 =	11 − 8 =
11 = 3 +	11 = 6 +	10 = 4 +	11 = 8 +	11 = 5 +	11 = 3 +	10 = 6 +

go to page 37, C

B

11 = 7 +	11 = 4 +	11 − 4 =	11 − 7 =	12 = 3 +	12 − 3 =	12 = 6 +
12 − 9 =	12 − 3 =	12 − 3 =	12 − 3 =	12 − 9 =	12 − 9 =	12 − 6 =
12 − 6 =	11 − 7 =	11 − 7 =	11 − 4 =	11 − 4 =	11 − 7 =	11 − 4 =
12 − 6 =	12 − 8 =	12 − 8 =	12 − 4 =	12 − 8 =	12 − 4 =	12 − 4 =
12 − 8 =	12 − 7 =	12 − 7 =	12 − 7 =	12 − 5 =	12 − 5 =	12 − 5 =
12 − 7 =	11 − 4 =	12 − 6 =	12 − 3 =	12 − 8 =	11 − 7 =	12 − 9 =
11 − 4 =	12 − 3 =	11 − 7 =	12 − 5 =	12 − 9 =	12 − 4 =	12 − 7 =

go to C

C

Speed practice: be very careful with the signs

3 + 2 =	4 + 3 =	2 + 3 =	2 + 5 =	4 + 4 =	3 + 5 =	6 + 3 =
2 − 1 =	3 − 2 =	3 − 3 =	3 − 0 =	5 − 2 =	5 − 3 =	4 − 4 =
2 + 4 =	3 + 4 =	6 + 2 =	2 + 6 =	5 + 4 =	4 + 6 =	3 + 6 =
5 − 4 =	6 − 3 =	5 − 5 =	7 − 5 =	7 − 2 =	6 − 4 =	7 − 3 =
5 + 2 =	6 + 4 =	4 + 5 =	5 + 6 =	7 + 3 =	3 + 7 =	8 + 3 =
7 − 4 =	8 − 0 =	8 − 5 =	9 − 4 =	9 − 9 =	10 − 6 =	9 − 5 =

go to page 40, A

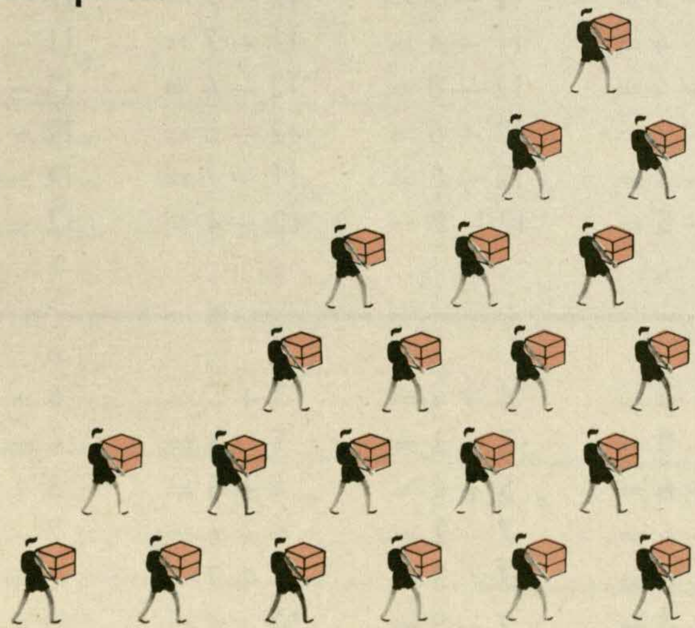
A **Speed practice:**

2 + 3 =	3 + 4 =	3 − 2 =	4 − 4 =	4 − 0 =	2 + 4 =	2 + 5 =
4 + 4 =	3 + 5 =	5 + 3 =	8 − 5 =	8 − 3 =	6 + 2 =	2 + 6 =
8 − 6 =	8 − 2 =	8 − 7 =	8 − 1 =	8 − 0 =	8 − 8 =	1 + 7 =
3 + 6 =	6 + 3 =	2 + 7 =	9 − 0 =	9 − 9 =	4 + 6 =	6 + 4 =
0 + 9 =	9 − 0 =	9 − 9 =	7 + 2 =	2 + 7 =	4 + 7 =	9 + 2 =
5 + 7 =	7 − 4 =	8 + 4 =	9 − 8 =	7 − 3 =	9 − 6 =	8 − 5 =

go to B

B **How many?**

Complete:



2 boxes 1 time = boxes

2 boxes 2 times = boxes

2 boxes 3 times = boxes

2 boxes 4 times = boxes

2 boxes 5 times = boxes

2 boxes 6 times = boxes

go to page 41, A

A **Complete each column:**

2 × 1 =	1 × 2 =	2 × 6 =	2 × 1 =	3 × 2 =	2 × 2 =
2 × 2 =	2 × 2 =	2 × 5 =	2 × 3 =	2 × 2 =	2 × 1 =
2 × 3 =	3 × 2 =	2 × 4 =	2 × 5 =	1 × 2 =	3 × 2 =
2 × 4 =	4 × 2 =	2 × 3 =	2 × 2 =	5 × 2 =	2 × 5 =
2 × 5 =	5 × 2 =	2 × 2 =	2 × 4 =	4 × 2 =	6 × 2 =
2 × 6 =	6 × 2 =	2 × 1 =	2 × 6 =	6 × 2 =	4 × 2 =

go to B

B **Put in the missing numbers, counting in twos:**

(a) 2, 4, 6, , . (b) 2, , , , 10, . (c) 4, , 8, , .

go to D

C

3 × 1 =	1 × 3 =	3 × 3 =	2 × 3 =	3 × 2 =	3 × 3 =	3 × 4 =
3 × 3 =	3 × 2 =	1 × 3 =	3 × 1 =	3 × 3 =	3 × 4 =	4 × 3 =
3 × 5 =	5 × 3 =	3 × 6 =	6 × 3 =	4 × 3 =	6 × 3 =	5 × 3 =
6 × 3 =	3 × 4 =	3 × 2 =	5 × 3 =	3 × 5 =	4 × 3 =	3 × 6 =
3 × 3 =	3 × 5 =	3 × 4 =	4 × 3 =	3 × 6 =	5 × 3 =	3 × 4 =

go to page 45, A

D

2 × 1 =	1 × 2 =	2 × 2 =	2 × 3 =	3 × 2 =	2 × 4 =	4 × 2 =
4 × 2 =	2 × 5 =	5 × 2 =	2 × 6 =	6 × 2 =	5 × 2 =	3 × 2 =
5 × 2 =	3 × 2 =	2 × 6 =	4 × 2 =	2 × 3 =	2 × 4 =	6 × 2 =
2 × 4 =	6 × 2 =	4 × 2 =	2 × 5 =	2 × 4 =	3 × 2 =	2 × 6 =
2 × 3 =	2 × 6 =	2 × 2 =	2 × 4 =	4 × 2 =	2 × 6 =	2 × 5 =

go to page 42, A

A

2 × 1 =	2 × 2 =	3 × 2 =	2 × 5 =	4 × 2 =	2 × 4 =	6 × 2 =

6 or 7 correct, go to page 43, A; 5 or less, go to B

B **Complete by writing the answers below the line:**

2 ×	1	2	3	4	5	6

go to C

C

2 × 1 =	1 × 2 =	2 × 2 =	2 × 4 =	4 × 2 =	2 × 3 =	2 × 6 =
2 × 2 =	3 × 2 =	2 × 3 =	1 × 2 =	2 × 1 =	2 × 4 =	4 × 2 =
2 × 6 =	6 × 2 =	2 × 5 =	5 × 2 =	2 × 3 =	2 × 6 =	3 × 2 =
5 × 2 =	4 × 2 =	2 × 6 =	2 × 4 =	2 × 5 =	4 × 2 =	5 × 2 =
2 × 6 =	2 × 3 =	2 × 4 =	2 × 5 =	6 × 2 =	2 × 5 =	2 × 6 =
2 × 4 =	2 × 5 =	6 × 2 =	2 × 3 =	4 × 2 =	2 × 6 =	5 × 2 =

go to page 44, A

D **Complete each column:**

5 × 1 =	1 × 5 =	5 × 2 =	5 × = 15	× 5 = 20	5 × 1 =
5 × 2 =	2 × 5 =	5 × 3 =	5 × = 10	× 5 = 10	3 × 5 =
5 × 3 =	3 × 5 =	5 × 5 =	5 × = 20	× 5 = 30	5 × 5 =
5 × 4 =	4 × 5 =	5 × 1 =	5 × = 30	× 5 = 5	2 × 5 =
5 × 5 =	5 × 5 =	5 × 4 =	5 × = 5	× 5 = 15	5 × 6 =
5 × 6 =	6 × 5 =	5 × 6 =	5 × = 25	× 5 = 25	4 × 5 =

go to E

E **Put in the missing numbers, counting in fives:**

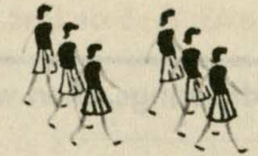
(a) 5, 10, 15, (b) , 10, , , 25. (c) 5, , , 20, , .

go to page 45, D

A **Complete:**



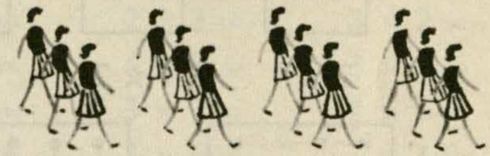
3 girls in 1 row = girls



3 girls in 2 rows = girls



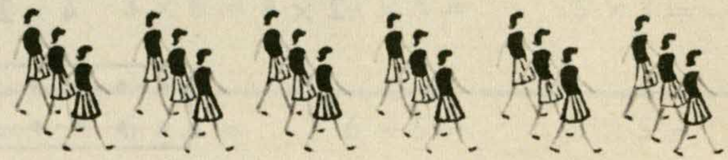
3 girls in 3 rows = girls



3 girls in 4 rows = girls



3 girls in 5 rows = girls



3 girls in 6 rows = girls

go to B

B **Complete each column:**

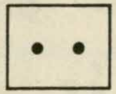
3 × 1 =	1 × 3 =	3 × 2 =	3 × = 6	× 3 = 9	2 × 3 =
3 × 2 =	2 × 3 =	3 × 3 =	3 × = 3	× 3 = 12	3 × 1 =
3 × 3 =	3 × 3 =	3 × 5 =	3 × = 9	× 3 = 15	3 × 3 =
3 × 4 =	4 × 3 =	3 × 1 =	3 × = 18	× 3 = 3	6 × 3 =
3 × 5 =	5 × 3 =	3 × 4 =	3 × = 12	× 3 = 18	5 × 3 =
3 × 6 =	6 × 3 =	3 × 6 =	3 × = 15	× 3 = 6	3 × 4 =

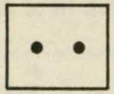
go to page 41, C

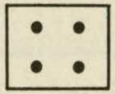
A $2 \times 1 =$ $2 \times 3 =$ $3 \times 2 =$ $2 \times 2 =$ $4 \times 2 =$ $5 \times 2 =$ $2 \times 6 =$

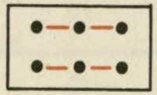
6 or 7 correct, go to page 43, A; 5 or less, go to B

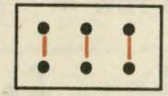
B **Look carefully at these drawings, then work the sums below:**

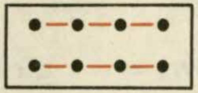

2×1

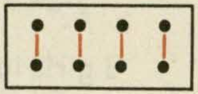

1×2

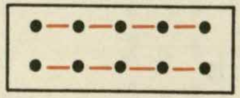

2×2

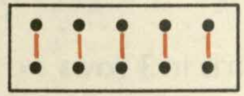

2×3

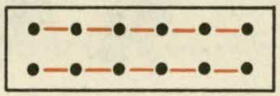

3×2

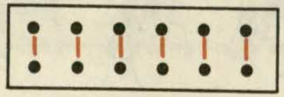

2×4


4×2


2×5


5×2


2×6


6×2

$2 \times 1 =$	$2 \times 3 =$	$2 \times 2 =$	$3 \times 2 =$	$4 \times 2 =$	$2 \times 4 =$	$5 \times 2 =$
$2 \times 5 =$	$5 \times 2 =$	$4 \times 2 =$	$2 \times 2 =$	$2 \times 5 =$	$6 \times 2 =$	$2 \times 6 =$
$2 \times 6 =$	$6 \times 2 =$	$1 \times 2 =$	$2 \times 6 =$	$2 \times 3 =$	$2 \times 5 =$	$3 \times 2 =$
$2 \times 3 =$	$2 \times 4 =$	$2 \times 3 =$	$4 \times 2 =$	$2 \times 5 =$	$2 \times 6 =$	$2 \times 2 =$
$4 \times 2 =$	$5 \times 2 =$	$2 \times 4 =$	$5 \times 2 =$	$6 \times 2 =$	$2 \times 4 =$	$2 \times 6 =$
$2 \times 5 =$	$2 \times 4 =$	$2 \times 6 =$	$2 \times 3 =$	$2 \times 2 =$	$2 \times 6 =$	$2 \times 5 =$
$2 \times 3 =$	$3 \times 2 =$	$2 \times 5 =$	$5 \times 2 =$	$2 \times 4 =$	$4 \times 2 =$	$2 \times 6 =$
$6 \times 2 =$	$2 \times 2 =$	$2 \times 4 =$	$2 \times 1 =$	$6 \times 2 =$	$3 \times 2 =$	$2 \times 5 =$

go to page 43, A

A

$3 \times 1 =$	$3 \times 3 =$	$2 \times 3 =$	$3 \times 5 =$	$5 \times 3 =$	$4 \times 3 =$	$3 \times 6 =$

6 or 7 correct, go to page 42, D; 5 or less, go to B

B **Complete by writing the answers below the line:**

$3 \times$	1	2	3	4	5	6

go to C

C

$3 \times 2 =$	$2 \times 3 =$	$3 \times 1 =$	$3 \times 3 =$	$2 \times 3 =$	$3 \times 2 =$	$3 \times 4 =$
$2 \times 3 =$	$3 \times 4 =$	$3 \times 5 =$	$6 \times 3 =$	$4 \times 3 =$	$3 \times 2 =$	$3 \times 6 =$
$3 \times 1 =$	$3 \times 2 =$	$3 \times 4 =$	$3 \times 3 =$	$3 \times 2 =$	$3 \times 6 =$	$4 \times 3 =$
$6 \times 3 =$	$5 \times 3 =$	$2 \times 3 =$	$3 \times 4 =$	$3 \times 5 =$	$3 \times 3 =$	$5 \times 3 =$
$4 \times 3 =$	$3 \times 6 =$	$3 \times 5 =$	$6 \times 3 =$	$3 \times 4 =$	$6 \times 3 =$	$3 \times 2 =$
$3 \times 3 =$	$4 \times 3 =$	$3 \times 6 =$	$3 \times 4 =$	$3 \times 6 =$	$3 \times 5 =$	$6 \times 3 =$

go to page 46, A

D

$5 \times 1 =$	$5 \times 3 =$	$3 \times 5 =$	$4 \times 5 =$	$5 \times 2 =$	$6 \times 5 =$	$5 \times 5 =$

6 or 7 correct, go to page 47, C; 5 or less, go to E

E **Complete by writing the answers below the line:**

$5 \times$	1	2	3	4	5	6

go to F

F

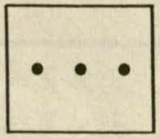
$5 \times 2 =$	$2 \times 5 =$	$5 \times 4 =$	$4 \times 5 =$	$5 \times 5 =$	$5 \times 6 =$	$6 \times 5 =$
$5 \times 1 =$	$5 \times 3 =$	$5 \times 5 =$	$3 \times 5 =$	$4 \times 5 =$	$5 \times 4 =$	$2 \times 5 =$
$5 \times 6 =$	$6 \times 5 =$	$5 \times 5 =$	$5 \times 6 =$	$5 \times 3 =$	$2 \times 5 =$	$3 \times 5 =$
$5 \times 3 =$	$5 \times 5 =$	$5 \times 6 =$	$5 \times 5 =$	$5 \times 3 =$	$5 \times 6 =$	$5 \times 2 =$
$5 \times 2 =$	$5 \times 6 =$	$4 \times 5 =$	$6 \times 5 =$	$5 \times 4 =$	$5 \times 5 =$	$5 \times 3 =$

go to page 47, A

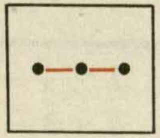
A $2 \times 3 =$ $3 \times 1 =$ $3 \times 4 =$ $4 \times 3 =$ $5 \times 3 =$ $3 \times 3 =$ $3 \times 6 =$

6 or 7 correct, go to page 42, D; 5 or less, go to B

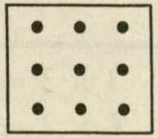
B **Look carefully at these drawings, then work the sums below:**



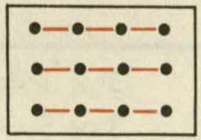
3×1



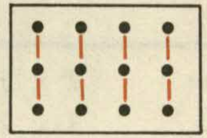
1×3



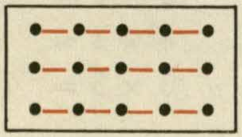
3×3



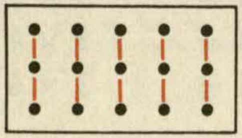
3×4



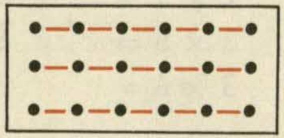
4×3



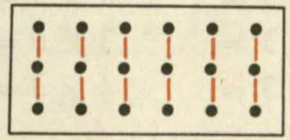
3×5



5×3



3×6



6×3

$3 \times 3 =$	$4 \times 3 =$	$3 \times 4 =$	$2 \times 3 =$	$3 \times 6 =$	$6 \times 3 =$	$5 \times 3 =$
$3 \times 1 =$	$5 \times 3 =$	$3 \times 3 =$	$1 \times 3 =$	$3 \times 5 =$	$4 \times 3 =$	$3 \times 3 =$
$3 \times 2 =$	$4 \times 3 =$	$6 \times 3 =$	$3 \times 4 =$	$3 \times 3 =$	$5 \times 3 =$	$3 \times 6 =$
$3 \times 1 =$	$1 \times 3 =$	$3 \times 2 =$	$3 \times 3 =$	$3 \times 4 =$	$4 \times 3 =$	$3 \times 5 =$
$2 \times 3 =$	$5 \times 3 =$	$3 \times 3 =$	$3 \times 4 =$	$2 \times 3 =$	$3 \times 5 =$	$3 \times 6 =$
$3 \times 6 =$	$6 \times 3 =$	$3 \times 5 =$	$5 \times 3 =$	$3 \times 6 =$	$3 \times 2 =$	$3 \times 3 =$
$3 \times 2 =$	$3 \times 4 =$	$3 \times 3 =$	$2 \times 3 =$	$3 \times 4 =$	$4 \times 3 =$	$3 \times 2 =$
$5 \times 3 =$	$2 \times 3 =$	$4 \times 3 =$	$6 \times 3 =$	$5 \times 3 =$	$3 \times 6 =$	$3 \times 4 =$
$3 \times 4 =$	$3 \times 6 =$	$3 \times 5 =$	$5 \times 3 =$	$3 \times 4 =$	$3 \times 5 =$	$6 \times 3 =$

go to page 42, D

A

$5 \times 1 =$	$5 \times 3 =$	$3 \times 5 =$	$5 \times 2 =$	$5 \times 5 =$	$4 \times 5 =$	$5 \times 6 =$

6 or 7 correct, go to C; 5 or less, go to B

B

$5 \times 2 =$	$2 \times 5 =$	$5 \times 4 =$	$4 \times 5 =$	$5 \times 3 =$	$3 \times 5 =$	$5 \times 5 =$
$5 \times 5 =$	$3 \times 5 =$	$5 \times 3 =$	$1 \times 5 =$	$5 \times 1 =$	$5 \times 4 =$	$4 \times 5 =$
$5 \times 6 =$	$6 \times 5 =$	$5 \times 2 =$	$2 \times 5 =$	$5 \times 3 =$	$5 \times 6 =$	$3 \times 5 =$
$2 \times 5 =$	$4 \times 5 =$	$5 \times 6 =$	$5 \times 4 =$	$5 \times 5 =$	$4 \times 5 =$	$2 \times 5 =$
$5 \times 6 =$	$5 \times 5 =$	$5 \times 4 =$	$6 \times 5 =$	$5 \times 4 =$	$5 \times 3 =$	$5 \times 6 =$
$5 \times 4 =$	$6 \times 5 =$	$5 \times 5 =$	$4 \times 5 =$	$5 \times 3 =$	$5 \times 6 =$	$5 \times 5 =$
$5 \times 5 =$	$2 \times 5 =$	$5 \times 3 =$	$5 \times 6 =$	$5 \times 5 =$	$5 \times 4 =$	$6 \times 5 =$
$5 \times 1 =$	$3 \times 5 =$	$5 \times 2 =$	$5 \times 3 =$	$4 \times 5 =$	$6 \times 5 =$	$3 \times 5 =$

go to C

C **Complete by writing the answers below the line:**

	1	2	3	4	5	6
$4 \times$						

go to D

D

$4 \times 2 =$	$4 \times 3 =$	$4 \times 1 =$	$4 \times 6 =$	$4 \times 4 =$	$4 \times 6 =$	$4 \times 5 =$
$4 \times 1 =$	$4 \times 2 =$	$2 \times 4 =$	$4 \times 4 =$	$4 \times 3 =$	$3 \times 4 =$	$4 \times 6 =$
$4 \times 5 =$	$5 \times 4 =$	$4 \times 6 =$	$6 \times 4 =$	$4 \times 2 =$	$2 \times 4 =$	$4 \times 5 =$
$4 \times 6 =$	$4 \times 3 =$	$3 \times 4 =$	$4 \times 5 =$	$4 \times 4 =$	$5 \times 4 =$	$4 \times 4 =$
$4 \times 5 =$	$4 \times 4 =$	$4 \times 2 =$	$6 \times 4 =$	$4 \times 6 =$	$6 \times 4 =$	$4 \times 4 =$
$4 \times 4 =$	$4 \times 2 =$	$6 \times 4 =$	$4 \times 4 =$	$4 \times 3 =$	$4 \times 5 =$	$4 \times 6 =$
$4 \times 2 =$	$4 \times 4 =$	$4 \times 3 =$	$4 \times 6 =$	$4 \times 5 =$	$4 \times 4 =$	$5 \times 4 =$
$4 \times 6 =$	$4 \times 5 =$	$4 \times 6 =$	$4 \times 3 =$	$4 \times 4 =$	$4 \times 3 =$	$6 \times 4 =$

go to page 48, A

A

4 × 1 =	2 × 4 =	4 × 3 =	3 × 4 =	5 × 4 =	4 × 4 =	4 × 6 =

6 or 7 correct, go to C; 5 or less, go to B

B

4 × 1 =	3 × 4 =	4 × 3 =	4 × 6 =	6 × 4 =	5 × 4 =	4 × 5 =
4 × 2 =	4 × 5 =	5 × 4 =	4 × 3 =	3 × 4 =	4 × 4 =	4 × 6 =
6 × 4 =	4 × 6 =	4 × 4 =	2 × 4 =	4 × 4 =	4 × 6 =	4 × 3 =
4 × 4 =	3 × 4 =	4 × 4 =	6 × 4 =	4 × 4 =	4 × 5 =	4 × 2 =
4 × 6 =	4 × 4 =	4 × 5 =	4 × 3 =	4 × 5 =	6 × 4 =	4 × 4 =
4 × 2 =	4 × 3 =	5 × 4 =	4 × 4 =	6 × 4 =	4 × 3 =	4 × 6 =
4 × 3 =	4 × 6 =	6 × 4 =	2 × 4 =	4 × 5 =	5 × 4 =	4 × 4 =
4 × 2 =	4 × 1 =	4 × 5 =	4 × 6 =	4 × 3 =	4 × 4 =	4 × 6 =

go to C

C **Complete by writing the answers below the line:**

6 ×	1	2	3	4	5	6

go to D

D

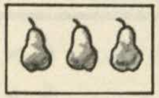
6 × 2 =	2 × 6 =	6 × 1 =	3 × 6 =	6 × 3 =	5 × 6 =	6 × 5 =
6 × 4 =	4 × 6 =	6 × 5 =	6 × 6 =	5 × 6 =	4 × 6 =	6 × 4 =
6 × 6 =	6 × 5 =	6 × 3 =	4 × 6 =	3 × 6 =	6 × 5 =	6 × 6 =
5 × 6 =	4 × 6 =	6 × 6 =	6 × 3 =	6 × 6 =	6 × 4 =	6 × 2 =
6 × 3 =	6 × 5 =	6 × 2 =	6 × 4 =	6 × 1 =	6 × 3 =	6 × 6 =
6 × 4 =	6 × 6 =	6 × 5 =	6 × 3 =	4 × 6 =	6 × 6 =	5 × 6 =
6 × 5 =	6 × 3 =	3 × 6 =	6 × 6 =	6 × 5 =	5 × 6 =	6 × 4 =
6 × 2 =	6 × 5 =	6 × 6 =	6 × 4 =	6 × 1 =	6 × 3 =	6 × 6 =

go to page 50, A

A **Look carefully at these drawings, then work the sums below:**



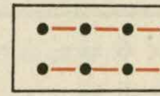
1 × 1



3 × 1

3 × 0

5 × 0



2 × 4

2 × 0

2 × 1 =	2 × 0 =	3 × 1 =	3 × 0 =	4 × 2 =	4 × 0 =	5 × 3 =
3 × 3 =	3 × 0 =	4 × 4 =	4 × 1 =	4 × 0 =	6 × 2 =	2 × 6 =
4 × 0 =	5 × 5 =	5 × 0 =	2 × 1 =	1 × 2 =	4 × 5 =	4 × 0 =
2 × 6 =	2 × 5 =	4 × 4 =	2 × 3 =	6 × 0 =	2 × 4 =	1 × 3 =
1 × 0 =	2 × 4 =	3 × 2 =	4 × 0 =	2 × 2 =	3 × 3 =	5 × 0 =
2 × 6 =	3 × 3 =	3 × 5 =	3 × 4 =	4 × 2 =	3 × 6 =	6 × 2 =
4 × 4 =	6 × 5 =	4 × 6 =	5 × 6 =	6 × 0 =	6 × 6 =	6 × 5 =

go to page 50, C

B **Speed practice:**

9 + 3 =	3 + 9 =	12 − 9 =	12 − 3 =	9 + 2 =	2 + 9 =	11 − 9 =
11 − 2 =	7 − 7 =	7 − 0 =	8 + 4 =	4 + 8 =	12 − 4 =	12 − 8 =
7 + 5 =	5 + 7 =	12 − 7 =	12 − 5 =	6 + 4 =	10 − 6 =	10 − 4 =
6 + 6 =	12 − 6 =	5 + 5 =	10 − 5 =	6 + 5 =	5 + 6 =	11 − 5 =
11 − 6 =	11 − 5 =	7 + 4 =	4 + 7 =	11 − 4 =	11 − 7 =	0 + 0 =
8 + 3 =	3 + 8 =	11 − 8 =	11 − 3 =	12 − 7 =	9 − 6 =	6 + 7 =
12 − 3 =	11 − 7 =	6 + 7 =	5 + 6 =	9 − 7 =	6 + 7 =	8 − 5 =
7 − 7 =	8 + 5 =	4 + 8 =	9 − 6 =	10 − 7 =	4 + 7 =	11 − 4 =
4 + 9 =	9 − 5 =	9 + 6 =	12 − 7 =	5 + 8 =	10 − 5 =	12 − 9 =

go to page 51, A

A	2 × 6 =	6 × 1 =	6 × 3 =	6 × 4 =	4 × 6 =	6 × 6 =	5 × 6 =

6 or 7 correct, go to page 49, A; 5 or less, go to B

B	6 × 1 =	1 × 6 =	6 × 3 =	3 × 6 =	4 × 6 =	6 × 4 =	2 × 6 =
	5 × 6 =	6 × 5 =	6 × 4 =	6 × 6 =	6 × 2 =	5 × 6 =	6 × 6 =
	6 × 6 =	6 × 3 =	6 × 5 =	6 × 4 =	6 × 3 =	6 × 6 =	6 × 5 =
	2 × 6 =	6 × 4 =	6 × 6 =	5 × 6 =	6 × 5 =	6 × 3 =	4 × 6 =
	4 × 6 =	5 × 6 =	6 × 5 =	6 × 6 =	6 × 4 =	5 × 6 =	6 × 3 =
	6 × 6 =	6 × 2 =	6 × 4 =	6 × 5 =	3 × 6 =	6 × 6 =	4 × 6 =
	6 × 3 =	1 × 6 =	6 × 6 =	4 × 6 =	6 × 6 =	6 × 4 =	6 × 5 =

go to page 49,

C	3 × 1 =	3 × 0 =	2 × 2 =	2 × 0 =	6 × 3 =	6 × 0 =	1 × 0 =

6 or 7 correct, go to page 49, B; 5 or less, go to D

D	1 × 1 =	1 × 0 =	2 × 1 =	2 × 0 =	6 × 1 =	6 × 0 =	4 × 1 =
	4 × 0 =	3 × 0 =	4 × 3 =	5 × 0 =	4 × 5 =	5 × 3 =	4 × 6 =
	6 × 2 =	4 × 0 =	5 × 5 =	5 × 4 =	6 × 3 =	4 × 0 =	6 × 4 =
	5 × 0 =	6 × 4 =	6 × 6 =	6 × 5 =	3 × 5 =	4 × 4 =	6 × 6 =
	3 × 6 =	4 × 5 =	5 × 4 =	6 × 2 =	6 × 5 =	5 × 3 =	4 × 5 =
	3 × 0 =	4 × 4 =	6 × 6 =	5 × 3 =	5 × 0 =	3 × 3 =	3 × 0 =
	6 × 4 =	6 × 0 =	5 × 0 =	5 × 5 =	6 × 5 =	2 × 0 =	6 × 6 =
	5 × 0 =	5 × 4 =	1 × 0 =	4 × 0 =	3 × 4 =	4 × 6 =	2 × 0 =
	4 × 6 =	3 × 5 =	4 × 5 =	6 × 4 =	6 × 0 =	6 × 6 =	5 × 6 =
	3 × 0 =	2 × 0 =	2 × 1 =	5 × 0 =	5 × 5 =	6 × 1 =	6 × 0 =

go to page 49, B

A **Work across the page: Add + Plus + Total**

Add 5 and 2	add 6 and 1	add 6 and 0	add 7 and 0	add 0 and 5	
Add 0 to 3	add 0 to 6	add 7 and 1	add 6 and 4	add 3 and 6	
8 plus 1 =	9 plus 1 =	8 plus 0 =	9 plus 0 =	5 plus 3 =	4 plus 4 =
6 plus 5 =	9 plus 2 =	7 plus 3 =	8 plus 4 =	6 plus 3 =	7 plus 4 =

If the total of 4 and 2 is 6, what is the total of 2 and 4?

If the total of 0 and 3 is 3, what is the total of 3 and 0?

Total of 5 and 6 =	total of 7 and 0 =	total of 9 and 3 =	total of 10 and 4 =
Total of 10 and 3 =	total of 9 and 4 =	total of 8 and 6 =	total of 6 and 7 =

go to B

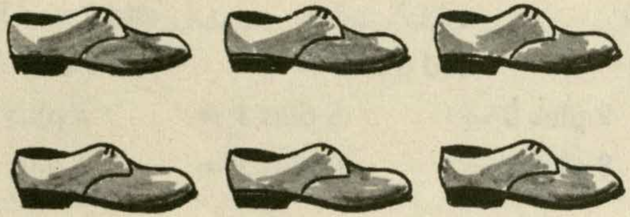
B **Minus − Subtract**

From 10 take 8	from 8 take 6	take 10 from 12	take 9 from 11	from 9 take 3
Take 7 from 9	from 12 take 3	from 11 take 8	take 6 from 9	take 7 from 10
2 from 4 =	4 from 11 =	0 from 6 =	5 from 8 =	3 from 8 =
3 from 7 =	4 from 8 =	7 from 10 =	3 from 10 =	4 from 9 =
9 minus 8 =	11 minus 3 =	8 minus 8 =	9 minus 0 =	12 minus 5 =
12 minus 4 =	10 minus 3 =	12 minus 8 =	11 minus 6 =	12 minus 9 =

Subtract 7 from 11	subtract 5 from 8	subtract 7 from 10	subtract 5 from 9
Subtract 5 from 10	subtract 6 from 9	subtract 6 from 11	subtract 7 from 12
From 9 subtract 7	from 12 subtract 6	from 7 subtract 3	from 11 subtract 8
From 11 subtract 4	from 10 subtract 8	from 9 subtract 4	from 12 subtract 5

go to page 52, A

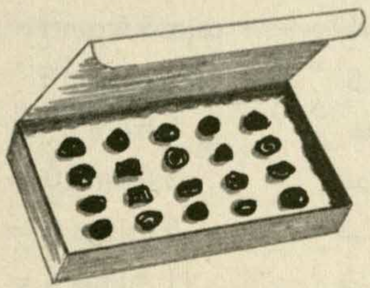
A **Complete:**



How many rows of shoes?
How many shoes in each row?
How many shoes altogether?
How many pairs of shoes?

Are there more rows of 3 than there are shoes altogether?
Are there more pairs of shoes than there are shoes altogether?
Are there more shoes than there are pairs of shoes?
Are there more shoes than there are rows of 3 shoes?

$6 = 3 \times$ $\quad$ $6 \div 3 =$ $\quad$ $6 = 2 \times$ $\quad$ $6 \div 2 =$ $\quad$ $6 \div 3 =$ $\quad$ $6 \div 2 =$



How many chocolates?
How many boys can have 4 each?
How many girls can have 5 each?
$4 \times 5 =$ $\quad$ $5 \times 4 =$

$4 \times 5 =$ $\quad$ $5 \times 4 =$ $\quad$ $20 = 4 \times$ $\quad$ $20 \div 4 =$ $\quad$ $20 = 5 \times$ $\quad$ $20 \div 5 =$

go to B

B $6 \div 3 =$ $\quad$ $6 \div 2 =$ $\quad$ $20 \div 5 =$ $\quad$ $20 \div 4 =$ $\quad$ $6 \div 3 =$ $\quad$ $6 \div 6 =$ $\quad$ $6 \div 2 =$

$20 \div 4 =$ $\quad$ $20 \div 5 =$ $\quad$ $6 \div 2 =$ $\quad$ $6 \div 3 =$ $\quad$ $20 \div 5 =$ $\quad$ $20 \div 4 =$ $\quad$ $6 \div 6 =$

go to page 53, A

A You have practised tables to 6 × 6. Copy the tables square below and complete it by multiplying each number in the top row by each figure in the left column, placing your answer in the square beneath the first number and in line with the figure by which you are multiplying.

	1	2	3	4	5	6
1	1	2				
2	2	4	6			12
3				12		
4			12			
5						
6		12				

In your square you will find that four of the answers are the number 12, coming from 2 × 6, 6 × 2, 3 × 4, 4 × 3.
This tells us that

12 ÷ 2 = 6 and 12 ÷ 6 = 2, 12 ÷ 3 = 4 and 12 ÷ 4 = 3

In the same way you can find all the pairs of numbers which can be multiplied together to make each of the numbers in the square.

Use the square to complete the answers in B

B **Practice:**

2 × = 4	4 ÷ 2 =	2 × 1 =	2 ÷ 2 =	3 × = 3	3 ÷ 3 =	4 ÷ 4 =
2 × = 6	6 ÷ 2 =	6 ÷ 3 =	3 × = 9	9 ÷ 3 =	4 × = 8	8 ÷ 4 =
8 ÷ 2 =	5 × = 10	10 ÷ 5 =	10 ÷ 2 =	2 × = 12	12 ÷ 2 =	12 ÷ 6 =
5 × = 15	15 ÷ 5 =	3 × = 15	15 ÷ 3 =	3 × = 12	4 × = 12	12 ÷ 4 =
12 ÷ 3 =	4 × = 16	16 ÷ 4 =	5 × = 20	20 ÷ 5 =	4 × = 20	20 ÷ 4 =
8 ÷ 2 =	8 ÷ 4 =	9 ÷ 3 =	10 ÷ 2 =	10 ÷ 5 =	6 ÷ 3 =	6 ÷ 2 =
4 ÷ 4 =	5 ÷ 5 =	12 ÷ 2 =	12 ÷ 6 =	6 ÷ 6 =	12 ÷ 4 =	12 ÷ 3 =
16 ÷ 4 =	15 ÷ 5 =	15 ÷ 3 =	20 ÷ 4 =	20 ÷ 5 =	9 ÷ 3 =	16 ÷ 4 =
5 × = 25	25 ÷ 5 =	3 × = 18	18 ÷ 3 =	6 × = 18	18 ÷ 6 =	25 ÷ 5 =
18 ÷ 6 =	6 × = 24	24 ÷ 6 =	4 × = 24	24 ÷ 4 =	6 × = 36	36 ÷ 6 =
36 ÷ 6 =	18 ÷ 3 =	6 × = 30	30 ÷ 6 =	5 × = 30	30 ÷ 5 =	24 ÷ 6 =

go to page 54, A

A	$2 \div 2 =$	$3 \div 3 =$	$4 \div 2 =$	$6 \div 2 =$	$6 \div 3 =$	$8 \div 2 =$	$8 \div 4 =$

6 or 7 correct, go to C; 5 or less, go to B

B	$2 \times 1 =$	$2 = 1 \times$	$2 \times \quad = 2$	$1 \times \quad = 2$	$2 \div 2 =$	$3 = 3 \times$	$3 \div 3 =$
	$2 \times \quad = 4$	$4 = 2 \times$	$4 \div 2 =$	$3 \times \quad = 6$	$2 \times \quad = 6$	$6 = 2 \times$	$6 \div 2 =$
	$6 = 3 \times$	$6 \div 3 =$	$2 \div 2 =$	$3 \div 3 =$	$6 \div 2 =$	$6 \div 3 =$	$4 \div 2 =$
	$2 \times \quad = 8$	$8 = 2 \times$	$8 \div 2 =$	$4 \times \quad = 8$	$8 = 4 \times$	$8 \div 4 =$	$8 \div 2 =$
	$8 \div 2 =$	$8 \div 4 =$	$6 \div 3 =$	$4 \div 2 =$	$3 \div 3 =$	$6 \div 2 =$	$8 \div 4 =$

go to page 56, A

C	$9 \div 3 =$	$10 \div 2 =$	$10 \div 5 =$	$5 \div 5 =$	$12 \div 3 =$	$12 \div 4 =$	$16 \div 4 =$

6 or 7 correct, go to E; 5 or less, go to D

D	$2 \times \quad = 10$	$10 = 2 \times$	$10 \div 2 =$	$5 \times \quad = 10$	$10 = 5 \times$	$10 \div 5 =$	$10 \div 2 =$
	$3 \times \quad = 9$	$9 = 3 \times$	$9 \div 3 =$	$4 \times \quad = 16$	$16 = 4 \times$	$16 \div 4 =$	$9 \div 3 =$
	$10 \div 5 =$	$10 \div 2 =$	$3 \times \quad = 12$	$12 = 3 \times$	$12 \div 3 =$	$12 = 4 \times$	$12 \div 4 =$
	$12 \div 3 =$	$12 \div 4 =$	$16 \div 4 =$	$9 \div 3 =$	$10 \div 5 =$	$9 \div 3 =$	$10 \div 2 =$

go to page 56, C

E	$12 \div 2 =$	$12 \div 6 =$	$15 \div 3 =$	$18 \div 3 =$	$18 \div 6 =$	$15 \div 5 =$	$25 \div 5 =$

6 or 7 correct, go to 55, A; 5 or less, go to F

F	$3 \times 5 =$	$3 \times \quad = 15$	$15 = 3 \times$	$15 \div 3 =$	$15 \div 5 =$	$12 = 2 \times$	$12 \div 2 =$
	$2 \times \quad = 12$	$12 \div 2 =$	$6 \times 2 =$	$6 \times \quad = 12$	$12 \div 6 =$	$15 = 5 \times$	$15 \div 5 =$
	$5 \times 5 =$	$25 = 5 \times$	$25 \div 5 =$	$3 \times 6 =$	$3 \times \quad = 18$	$6 \times \quad = 18$	$18 \div 6 =$
	$18 \div 3 =$	$12 \div 6 =$	$15 \div 3 =$	$18 \div 6 =$	$25 \div 5 =$	$15 \div 5 =$	$25 \div 5 =$

go to page 56, E

A

$20 \div 4 =$	$24 \div 6 =$	$24 \div 4 =$	$36 \div 6 =$	$20 \div 5 =$	$30 \div 5 =$	$30 \div 6 =$

6 or 7 correct, go to C; 5 or less, go to B

B

$4 \times 6 =$	$6 \times 4 =$	$4 \times 6 =$	$24 \div 6 =$	$24 \div 4 =$	$24 \div 6 =$	$24 \div 4 =$
$5 \times 4 =$	$20 \div 5 =$	$4 \times 5 =$	$20 \div 4 =$	$20 \div 5 =$	$20 \div 4 =$	$20 \div 5 =$
$6 \times 6 =$	$6 \times 6 =$	$36 \div 6 =$	$6 \times 5 =$	$5 \times 6 =$	$30 \div 6 =$	$36 \div 6 =$
$30 \div 5 =$	$24 \div 4 =$	$20 \div 5 =$	$36 \div 6 =$	$24 \div 6 =$	$20 \div 4 =$	$30 \div 6 =$
$36 \div 6 =$	$30 \div 6 =$	$24 \div 6 =$	$24 \div 4 =$	$20 \div 5 =$	$36 \div 6 =$	$30 \div 5 =$

go to page 57, B

C **Practice:**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

$11 + 2 =$	$12 + 2 =$	$11 + 0 =$	$12 + 0 =$	$13 + 2 =$	$9 + 0 =$	$11 + 2 =$
$11 + 4 =$	$13 + 2 =$	$12 + 3 =$	$9 + 5 =$	$11 + 4 =$	$8 + 6 =$	$12 + 3 =$
$12 + 3 =$	$9 + 5 =$	$11 + 4 =$	$12 + 2 =$	$13 + 3 =$	$11 + 3 =$	$12 + 0 =$
$8 + 6 =$	$11 + 3 =$	$13 + 2 =$	$11 + 5 =$	$12 + 4 =$	$9 + 5 =$	$13 + 3 =$
$13 + 0 =$	$13 + 3 =$	$8 + 6 =$	$12 + 5 =$	$14 + 2 =$	$11 + 5 =$	$12 + 4 =$
$11 + 5 =$	$14 + 2 =$	$12 + 4 =$	$14 + 3 =$	$9 + 6 =$	$12 + 5 =$	$14 + 2 =$
$14 + 3 =$	$12 + 5 =$	$9 + 6 =$	$11 + 6 =$	$14 + 3 =$	$11 + 7 =$	$11 + 6 =$
$9 + 6 =$	$11 + 7 =$	$8 + 7 =$	$10 + 7 =$	$13 + 4 =$	$8 + 7 =$	$12 + 6 =$
$11 + 6 =$	$10 + 7 =$	$13 + 4 =$	$11 + 7 =$	$12 + 6 =$	$14 + 4 =$	$13 + 5 =$
$12 + 6 =$	$8 + 7 =$	$15 + 2 =$	$14 + 4 =$	$10 + 7 =$	$13 + 4 =$	$11 + 7 =$
$14 + 4 =$	$13 + 6 =$	$14 + 5 =$	$12 + 6 =$	$13 + 5 =$	$15 + 2 =$	$13 + 6 =$
$15 + 3 =$	$13 + 5 =$	$9 + 7 =$	$15 + 3 =$	$14 + 5 =$	$15 + 4 =$	$14 + 6 =$
$13 + 6 =$	$9 + 7 =$	$7 + 9 =$	$15 + 4 =$	$14 + 6 =$	$7 + 8 =$	$15 + 3 =$

go to page 57, D

A

4 ÷ 2 =	3 ÷ 3 =	6 ÷ 3 =	2 ÷ 2 =	6 ÷ 2 =	8 ÷ 4 =	8 ÷ 2 =

6 or 7 correct, go to page 54, C; 5 or less, go to B

B

2 × 1 =	2 × = 2	2 = 2 ×	2 = 1 ×	2 ÷ 2 =	3 × = 3	3 ÷ 3 =
4 × = 4	4 ÷ 4 =	2 × = 4	4 = 2 ×	4 = × 2	4 ÷ 2 =	2 ÷ 2 =
6 = 2 ×	6 ÷ 2 =	6 = 3 ×	6 ÷ 3 =	2 × = 8	8 = 2 ×	8 ÷ 2 =
4 × = 8	8 = 4 ×	8 ÷ 4 =	8 ÷ 2 =	4 ÷ = 2	4 ÷ 4 =	8 ÷ 4 =
6 ÷ 3 =	6 ÷ 2 =	3 ÷ 3 =	8 ÷ 4 =	8 ÷ 4 =	6 ÷ 3 =	8 ÷ 2 =
4 ÷ 2 =	8 ÷ 4 =	8 ÷ 2 =	6 ÷ 3 =	3 ÷ 3 =	8 ÷ 4 =	6 ÷ 2 =

go to page 54, C

C

10 ÷ 2 =	10 ÷ 5 =	9 ÷ 3 =	5 ÷ 5 =	12 ÷ 4 =	16 ÷ 4 =	12 ÷ 3 =

6 or 7 correct, go to page 54, E; 5 or less, go to D

D

3 × 3 =	9 = 3 ×	9 ÷ 3 =	3 × = 9	9 ÷ 3 =	10 = 2 ×	10 ÷ 2 =
2 × = 10	10 ÷ 2 =	5 × 2 =	10 = 5 ×	5 × = 10	10 ÷ 5 =	5 ÷ 5 =
12 = 3 ×	3 × 4 =	3 × = 12	12 ÷ 3 =	4 × 3 =	12 = 4 ×	12 ÷ 4 =
4 × = 16	4 × 3 =	3 × = 9	2 × = 10	3 × 4 =	5 × = 5	10 ÷ 2 =
4 × 4 =	4 × = 16	16 = 4 ×	16 ÷ 4 =	10 ÷ 2 =	9 ÷ 3 =	12 ÷ 3 =
16 ÷ 4 =	9 ÷ 3 =	12 ÷ 3 =	10 ÷ 2 =	12 ÷ 4 =	10 ÷ 5 =	16 ÷ 4 =
12 ÷ = 4	10 ÷ 5 =	16 ÷ 4 =	9 ÷ 3 =	16 ÷ 4 =	10 ÷ 2 =	12 ÷ 4 =
16 ÷ 4 =	12 ÷ = 3	9 ÷ 3 = 3	10 ÷ 2 =	9 ÷ = 3	12 ÷ 3 =	16 ÷ 4 =
10 ÷ 5 =	16 ÷ = 4	12 ÷ =	5 ÷ 5 =	12 ÷ = 3	16 ÷ 2 =	8 ÷ 2 =

go to page 54, E

E

12 ÷ 6 =	15 ÷ 5 =	25 ÷ 5 =	15 ÷ 3 =	12 ÷ 2 =	18 ÷ 6 =	18 ÷ 3 =

6 or 7 correct, go to page 55, A; 5 or less, go to 57, A

A

$12 = 6 \times$	$12 = 2 \times$	$2 \times \quad = 12$	$6 \times \quad = 12$	$12 \div 2 =$	$12 \div 6 =$	$12 \div 2 =$
$6 \times 3 =$	$6 \times \quad = 18$	$18 \div 6 =$	$18 \div 3 =$	$5 \times \quad = 15$	$3 \times \quad = 15$	$15 \div 3 =$
$15 \div 5 =$	$15 \div 3 =$	$15 \div 5 =$	$5 \times 5 =$	$25 = 5 \times$	$25 \div 5 =$	$15 \div 5 =$
$6 \times \quad = 12$	$12 \div 6 =$	$12 \div 2 =$	$6 \times \quad = 18$	$18 \div 6 =$	$18 \div 3 =$	$12 \div 6 =$
$15 \div 3 =$	$25 \div 5 =$	$18 \div 3 =$	$12 \div 2 =$	$15 \div 5 =$	$18 \div 6 =$	$25 \div 5 =$

go to page 55, A

B

$24 \div 4 =$	$20 \div 5 =$	$36 \div 6 =$	$30 \div 5 =$	$30 \div 6 =$	$20 \div 4 =$	$24 \div 6 =$

6 or 7 correct, go to page 55, C; 5 or less, go to C

C

$30 = 5 \times$	$30 = 6 \times$	$30 \div 6 =$	$30 \div 5 =$	$24 = 6 \times$	$24 \div 6 =$	$24 \div 4 =$
$30 \div 6 =$	$30 \div 5 =$	$24 \div 6 =$	$24 \div 4 =$	$6 \times 6 =$	$36 = 6 \times$	$36 \div 6 =$
$36 \div 6 =$	$5 \times 4 =$	$4 \times \quad = 20$	$5 \times \quad = 20$	$20 \div 4 =$	$20 \div 5 =$	$30 \div 5 =$
$24 \div 6 =$	$30 \div 5 =$	$25 \div 5 =$	$30 \div 6 =$	$36 \div 6 =$	$24 \div 4 =$	$20 \div 4 =$
$30 \div 6 =$	$20 \div 5 =$	$36 \div 6 =$	$24 \div 4 =$	$24 \div 6 =$	$20 \div 4 =$	$36 \div 6 =$
$24 \div 4 =$	$36 \div 6 =$	$20 \div 4 =$	$30 \div 6 =$	$36 \div 6 =$	$24 \div 6 =$	$30 \div 5 =$

go to page 55, C

D

$11 + 1 =$	$8 + 6 =$	$10 + 7 =$	$11 + 2 =$	$12 + 1 =$	$11 + 4 =$	$13 + 3 =$

6 or 7 correct, go to page 58, C; 5 or less, go to E

E

$11 + 1 =$	$12 + 1 =$	$8 + 6 =$	$8 + 6 =$	$11 + 2 =$	$8 + 6 =$	$11 + 2 =$
$11 + 4 =$	$11 + 4 =$	$10 + 7 =$	$11 + 4 =$	$10 + 7 =$	$10 + 7 =$	$11 + 4 =$
$11 + 2 =$	$8 + 6 =$	$13 + 3 =$	$13 + 3 =$	$11 + 4 =$	$13 + 3 =$	$10 + 7 =$
$13 + 3 =$	$11 + 4 =$	$8 + 6 =$	$10 + 7 =$	$13 + 3 =$	$11 + 2 =$	$8 + 6 =$

go to page 58, A

A

12 + 1 =	10 + 7 =	11 + 1 =	11 + 4 =	8 + 6 =	11 + 2 =	13 + 3 =

6 or 7 correct, go to C; 5 or less, go to B

B

12 + 1 =	11 + 1 =	11 + 2 =	11 + 4 =	11 + 4 =	11 + 2 =	12 + 1 =
10 + 7 =	10 + 7 =	13 + 3 =	13 + 3 =	10 + 7 =	13 + 3 =	10 + 7 =
13 + 3 =	8 + 6 =	8 + 6 =	12 + 1 =	8 + 6 =	11 + 1 =	8 + 6 =
11 + 2 =	11 + 2 =	11 + 4 =	8 + 6 =	13 + 3 =	10 + 7 =	11 + 2 =
8 + 6 =	10 + 7 =	11 + 2 =	13 + 3 =	11 + 4 =	8 + 6 =	13 + 3 =

go to C

C

11 + 3 =	12 + 2 =	9 + 5 =	8 + 7 =	11 + 6 =	13 + 2 =	14 + 1 =

6 or 7 correct, go to E; 5 or less, go to D

D

12 + 2 =	12 + 2 =	11 + 3 =	11 + 6 =	11 + 3 =	11 + 6 =	11 + 6 =
13 + 2 =	14 + 1 =	13 + 2 =	9 + 5 =	9 + 5 =	13 + 2 =	9 + 5 =
11 + 6 =	9 + 5 =	12 + 2 =	8 + 7 =	8 + 7 =	12 + 2 =	8 + 7 =
8 + 7 =	13 + 2 =	8 + 7 =	9 + 5 =	11 + 6 =	8 + 7 =	9 + 5 =

go to page 60, A

E

12 + 3 =	13 + 5 =	12 + 6 =	14 + 2 =	11 + 5 =	14 + 3 =	9 + 6 =

6 or 7 correct, go to page 59, A; 5 or less, go to F

F

14 + 2 =	14 + 3 =	14 + 3 =	14 + 2 =	13 + 5 =	14 + 2 =	13 + 5 =
13 + 5 =	14 + 3 =	12 + 3 =	12 + 3 =	11 + 5 =	11 + 5 =	14 + 3 =
11 + 5 =	9 + 6 =	9 + 6 =	11 + 5 =	9 + 6 =	13 + 5 =	9 + 6 =
12 + 6 =	14 + 2 =	13 + 5 =	9 + 6 =	14 + 3 =	9 + 6 =	12 + 6 =

go to page 60, C

A

11 + 0 =	14 + 3 =	11 + 7 =	12 + 5 =	14 + 6 =	6 + 7 =	13 + 4 =

6 or 7 correct, go to C; 5 or less, go to B

B

1 + 0 =	6 + 0 =	11 + 0 =	12 + 0 =	12 + 5 =	12 + 5 =	6 + 7 =
12 + 5 =	11 + 7 =	11 + 7 =	12 + 5 =	11 + 7 =	14 + 3 =	14 + 6 =
14 + 3 =	14 + 3 =	14 + 6 =	13 + 4 =	13 + 4 =	14 + 6 =	13 + 4 =
13 + 4 =	6 + 7 =	13 + 4 =	11 + 7 =	14 + 6 =	12 + 5 =	14 + 6 =

go to page 60, E

C

15 + 2 =	9 + 7 =	15 + 3 =	14 + 4 =	15 + 4 =	13 + 6 =	14 + 5 =

6 or 7 correct, go to E; 5 or less, go to D

D

14 + 4 =	14 + 4 =	15 + 2 =	14 + 4 =	15 + 2 =	14 + 5 =	14 + 5 =
15 + 2 =	13 + 6 =	14 + 4 =	14 + 6 =	14 + 5 =	13 + 6 =	13 + 6 =
15 + 3 =	15 + 3 =	15 + 4 =	15 + 3 =	15 + 4 =	9 + 7 =	9 + 7 =
13 + 6 =	14 + 5 =	9 + 7 =	13 + 6 =	9 + 7 =	15 + 3 =	15 + 4 =

go to page 61, A

E

Find the total of 6 and 7

Find the total of (2 × 3) + 1

Find the total of (4 × 3) + 2

8 minus 6 = 9 minus 7 =

Subtract 9 from 12 Subtract 7 from 11

Which number is 3 less than 10?

Which number is 5 greater than 9?

What is the total of 3 + 2 + 4?

What is the total of 6 + 3 + 2?

What is the total of 7 + 0 + 4?

8 + 3 minus 4 = 13 minus 7 =

Subtract 5 from 12

Which number is 5 less than 11?

Which number is 7 greater than 11?

go to page 61, C

A	12 + 2 =	11 + 6 =	13 + 2 =	11 + 3 =	9 + 5 =	14 + 1 =	8 + 7 =

6 or 7 correct, go to page 58, E; 5 or less, go to B

B	12 + 2 =	12 + 2 =	13 + 2 =	12 + 2 =	13 + 2 =	13 + 2 =	14 + 1 =
	11 + 6 =	11 + 6 =	11 + 3 =	11 + 6 =	11 + 3 =	11 + 3 =	11 + 6 =
	9 + 5 =	9 + 5 =	12 + 2 =	9 + 5 =	9 + 5 =	13 + 2 =	9 + 5 =
	8 + 7 =	8 + 7 =	8 + 7 =	11 + 6 =	8 + 7 =	9 + 5 =	8 + 7 =
	9 + 5 =	13 + 2 =	12 + 2 =	8 + 7 =	11 + 3 =	14 + 1 =	11 + 6 =

go to page 58, E

C	12 + 3 =	13 + 5 =	9 + 6 =	11 + 5 =	14 + 2 =	12 + 6 =	14 + 3 =

6 or 7 correct, go to page 59, A; 5 or less, go to D

D	14 + 2 =	12 + 3 =	12 + 3 =	13 + 5 =	12 + 3 =	13 + 5 =	11 + 7 =
	14 + 3 =	12 + 6 =	12 + 6 =	14 + 3 =	14 + 3 =	12 + 6 =	12 + 6 =
	14 + 2 =	12 + 3 =	9 + 6 =	9 + 6 =	13 + 5 =	9 + 6 =	9 + 6 =
	13 + 5 =	14 + 3 =	11 + 5 =	11 + 5 =	9 + 6 =	11 + 5 =	12 + 6 =

go to page 59, A

E	6 + 7 =	13 + 4 =	12 + 0 =	14 + 3 =	11 + 7 =	12 + 5 =	14 + 6 =

6 or 7 correct, go to page 59, C; 5 or less, go to F

F	13 + 4 =	13 + 4 =	14 + 3 =	14 + 6 =	14 + 6 =	14 + 3 =	14 + 6 =
	12 + 5 =	12 + 5 =	14 + 6 =	13 + 4 =	11 + 0 =	12 + 0 =	14 + 3 =
	11 + 7 =	11 + 7 =	12 + 5 =	11 + 7 =	14 + 3 =	14 + 6 =	8 + 0 =
	14 + 3 =	7 + 6 =	13 + 4 =	14 + 6 =	12 + 5 =	11 + 7 =	12 + 5 =

go to page 59, C

A 15 + 2 = 13 + 6 = 15 + 3 = 8 + 7 = 14 + 4 = 15 + 4 = 14 + 5 =

6 or 7 correct, go to page 59, E; 5 or less, go to B

B

14 + 4 =	14 + 4 =	15 + 3 =	14 + 5 =	14 + 5 =	13 + 6 =	13 + 6 =
9 + 7 =	9 + 7 =	15 + 2 =	9 + 7 =	15 + 2 =	15 + 3 =	15 + 2 =
15 + 3 =	15 + 3 =	13 + 6 =	13 + 6 =	14 + 4 =	14 + 4 =	13 + 6 =
14 + 4 =	15 + 2 =	9 + 7 =	15 + 4 =	14 + 5 =	15 + 4 =	15 + 3 =
15 + 4 =	13 + 6 =	15 + 2 =	14 + 4 =	15 + 3 =	9 + 7 =	14 + 5 =
9 + 7 =	15 + 2 =	13 + 6 =	15 + 3 =	14 + 5 =	15 + 4 =	13 + 6 =
15 + 2 =	8 + 7 =	14 + 5 =	15 + 4 =	14 + 4 =	13 + 6 =	15 + 3 =

go to page 59, E

C **Speed practice:**

2 + 3 =	3 × 2 =	4 × 3 =	2 × 4 =	2 + 4 =	7 − 2 =	5 − 3 =
7 − 4 =	7 − 3 =	3 + 5 =	4 + 7 =	12 ÷ 2 =	12 ÷ 3 =	16 ÷ 4 =
6 + 0 =	8 − 0 =	0 × 4 =	0 × 6 =	8 − 5 =	9 − 6 =	9 − 3 =
15 ÷ 5 =	20 ÷ 4 =	7 + 5 =	5 + 7 =	3 × 3 =	2 × 6 =	3 × 4 =
9 − 5 =	9 − 4 =	10 − 3 =	18 ÷ 3 =	18 ÷ 6 =	24 ÷ 4 =	25 ÷ 5 =
8 + 3 =	3 + 8 =	4 + 7 =	9 − 2 =	10 − 6 =	6 + 7 =	11 − 4 =
12 ÷ 4 =	20 ÷ 5 =	3 × 6 =	4 × 4 =	4 × 6 =	11 − 3 =	11 − 8 =
5 × 3 =	5 × 0 =	6 × 0 =	8 + 0 =	7 − 0 =	7 − 7 =	6 × 4 =
8 + 7 =	9 + 6 =	6 × 5 =	24 ÷ 6 =	30 ÷ 5 =	12 − 4 =	12 − 8 =
12 − 3 =	6 × 6 =	11 + 7 =	11 − 6 =	8 + 7 =	12 − 7 =	36 ÷ 6 =
20 ÷ 5 =	9 − 5 =	4 + 7 =	7 + 5 =	12 ÷ 4 =	16 ÷ 4 =	11 − 3 =
7 + 3 =	5 × 3 =	36 ÷ 6 =	5 × 6 =	6 × 4 =	3 × 6 =	8 + 3 =

go to page 62, A

Work these sums as quickly and carefully as you can:

A

3 + 1 =	4 + 3 =	2 + 0 =	4 + 4 =	0 + 5 =	3 + 5 =	7 + 3 =
4 + 5 =	5 + 6 =	6 + 7 =	8 + 5 =	9 + 7 =	10 + 4 =	11 + 3 =
8 + 6 =	9 + 7 =	10 + 6 =	11 + 7 =	12 + 3 =	13 + 5 =	14 + 6 =

B

1 − 1 =	3 − 2 =	4 − 4 =	5 − 3 =	6 − 4 =	6 − 0 =	8 − 8 =
5 − 0 =	6 − 3 =	8 − 5 =	9 − 4 =	7 − 6 =	9 − 7 =	12 − 4 =
10 − 8 =	11 − 4 =	12 − 7 =	10 − 6 =	12 − 3 =	11 − 8 =	12 − 9 =

C

2 × 1 =	2 × 2 =	2 × 0 =	3 × 3 =	2 × 4 =	5 × 2 =	3 × 4 =
2 × 6 =	4 × 0 =	5 × 1 =	3 × 5 =	4 × 4 =	4 × 6 =	6 × 3 =
4 × 5 =	6 × 2 =	3 × 6 =	5 × 5 =	6 × 4 =	5 × 6 =	6 × 6 =

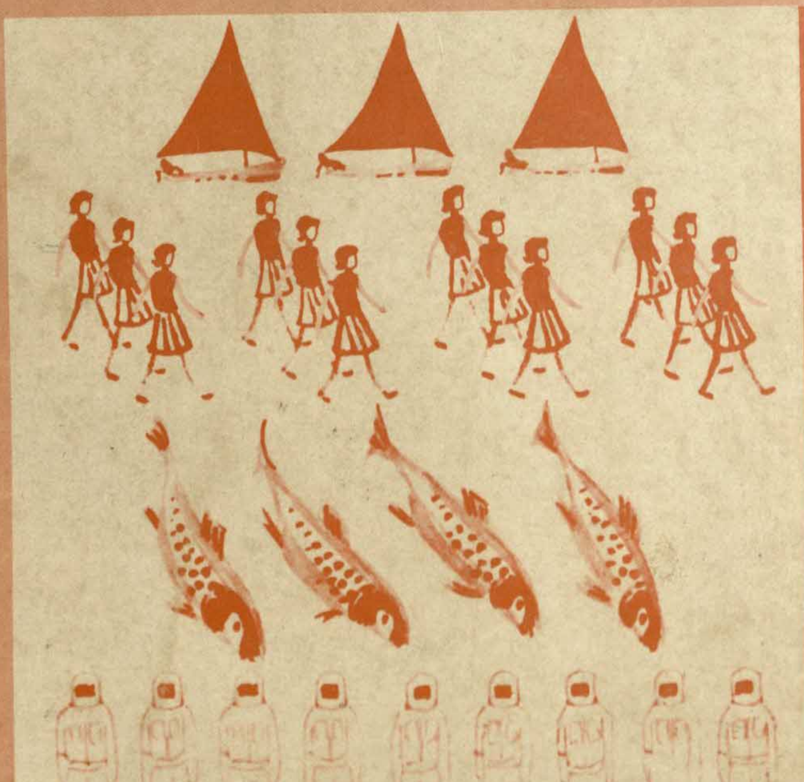
D

2 ÷ 2 =	3 ÷ 3 =	4 ÷ 2 =	6 ÷ 3 =	8 ÷ 4 =	9 ÷ 3 =	12 ÷ 6 =
10 ÷ 2 =	10 ÷ 5 =	12 ÷ 3 =	15 ÷ 5 =	12 ÷ 4 =	18 ÷ 3 =	16 ÷ 4 =
15 ÷ 3 =	20 ÷ 5 =	24 ÷ 6 =	18 ÷ 6 =	24 ÷ 4 =	30 ÷ 5 =	36 ÷ 6 =

E

4 + 0 =	2 + 3 =	6 ÷ 2 =	12 ÷ 2 =	2 × 3 =	5 − 2 =	6 − 3 =
3 × 4 =	2 × 0 =	8 − 5 =	1 − 0 =	3 + 7 =	4 + 6 =	2 × 6 =
7 − 4 =	6 + 7 =	3 × 5 =	9 − 9 =	20 ÷ 5 =	4 × 4 =	10 − 7 =
12 ÷ 6 =	3 × 0 =	13 + 6 =	10 − 4 =	4 × 3 =	25 ÷ 5 =	5 × 3 =
11 + 7 =	18 ÷ 6 =	11 − 5 =	6 × 3 =	14 + 5 =	30 ÷ 5 =	9 − 6 =
6 × 4 =	12 − 8 =	4 × 5 =	36 ÷ 6 =	12 − 7 =	6 × 6 =	24 ÷ 6 =

PROGRAMMED ARITHMETIC WORKBOOKS



One, two and accompanying answer books